

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 - III

Time Allowed : 2 hours

Full Marks : 150

*All questions carry equal mark of 2 each.
Attempt all questions.*

- _____ production precedes the industrial cocoon production.
(a) Commercial Seed Cocoon (b) Hybrid Seed Cocoon
(c) Seed Cocoon (d) Bivoltine Seed Cocoon
- Production of Seed Cocoon which can _____ in the emergence of moth is essential for grainage programme.
(a) Interfere (b) Convergence
(c) Contrast (d) Synchronise
- Hybrid seed production is conducted at
(a) P1 Multiplication Centre (b) P2 Multiplication Centre
(c) P3 Multiplication Centre (d) Grainage Centre
- In Bivoltine, the survival rate is low in summer moth, thereby creating scarcity of _____ Component.
(a) Male (b) Female
(c) Hybrid Seed (d) Bivoltine & Multivoltine
- In Grainage, the male moths for re-use are preserved for a maximum period of _____ days at a temperature of 7°C – 10°C.
(a) 2 to 3 days (b) 3 to 4 days
(c) 4 to 5 days (d) 5 to 6 days
- Whenever moth crushing machines are not available, double moth testing can be resorted to for _____ hybrids.
(a) Bivoltine (b) Multivoltine
(c) Indegenous (d) Double hybrid
- Packing the eggs tight generates _____ and results in lack of air for respiration of eggs.
(a) Carbondioxide (b) Carbonmonoxide
(c) Heat (d) Viruses
- The success of grainage depends on the _____ of desease free laying produced.
(a) Races (b) Hybrid
(c) Quantity (d) Quality
- The grainage work for processing 10,000 seeds cocoons can be conducted in a room of approximately _____ area in Muga.
(a) 900 Sq. feet (b) 1000 Sq. feet
(c) 1100 Sq. feet (d) 1200 Sq. feet
- Muga cocoon for seed purpose must be transported preferably during night time after _____ days of harvest from cocoonage.
(a) 4 to 6 days (b) 6 to 7 days
(c) 7 to 8 days (d) 8 to 10 days

11. In muga, egg laying is maximum in _____.
(a) Autumn and spring (b) Spring and summer
(c) Summer and Autumn (d) After autumn and spring
12. Muga Silkworm is _____ in nature.
(a) Trivoltine (b) Multivoltine
(c) Bivoltine (d) Univoltine
13. In mulberry silkworm hybrid multivoltinex Bivoltine will produced _____ races.
(a) Multivoltine (b) Bivoltine
(c) Univoltine (d) Mixed voltine
14. Mysore races are _____ in nature.
(a) Univoltine (b) Bivoltine
(c) Multivoltine (d) Trivoltine
15. Microscope used for detection of pebrine should have a magnification of atleast _____ time magnification.
(a) 500 (b) 600
(c) 300 (d) 400
16. Centrifuge has a head to carry four or eight tubes of 80cc capacity and having a speed of _____.
(a) 1000 rpm (b) 2000 rpm
(c) 3000 rpm (d) 4000 rpm
17. A cyclo mixer to shake the _____ for a homogenised fluid.
(a) Sodium hypochlorite (b) Potassium hydroxide
(c) Analogue (d) Sediments
18. Hot air oven to dry the moth at
(a) 70°C + 5°C (b) 80°C + 5°C
(c) 50°C + 5°C (d) 60°C + 5°C
19. Mortar and pestle are used to crushed and grind the another moth for _____ detection.
(a) Pebrine (b) Muscardine
(c) CPV (d) NPV
20. Moth crushing machine with 4 mixies having wet grinding blades, the speed of the mixies is _____.
(a) 15000 rpm (b) 16000 rpm
(c) 8000 rpm (d) 10000 rpm
21. _____ nos of moth examination tables are required for production of 15 lakhs nos Dfls/Annum.
(a) 20 (b) 15
(c) 5 (d) 10
22. _____ nos of celluler is required to produced 15 lakhs Dfls/Annum for grainages of mulberry dfls.
(a) 4,00,000 (b) 3,00,000
(c) 2,00,000 (d) 1,00,000
23. In muga, the number of cocoons in each garland may vary from 50 to _____ nos.
(a) 100 (b) 150
(c) 200 (d) 250
24. Maximum number of eggs is laid on the _____ day in muga grainage.
(a) first (b) second
(c) third (d) fourth

25. The coupled moth are usually tied on the _____ with a string of thread and the coupled moth are left undisturbed.
- (a) Dried branch (b) egg-card
(c) Kharika (d) Orika
26. In fumigation process of muga grainage hall, after 48 hrs of formalin spray, _____ commercial formaldehyde should be boiled inside the grainage hall Air tight.
- (a) 2% to 5% (b) 10% to 15%
(c) 20% to 30% (d) 35% to 40%
27. _____ ratio of slaked lime and bleaching powder are used as disinfectant in muga prior to rearing.
- (a) 1:9 (b) 1:7
(c) 9:1 (d) 7:1
28. _____ sodium hypochloride is used as foliar disinfectant in muga rearing.
- (a) 0.02% (b) 0.20%
(c) 0.002% (d) 0.200%
29. Uzi fly (Thorang) lays about _____ eggs on silk worm larvae.
- (a) 5 (b) 10
(c) 20 (d) 30
30. The causal organism of leaf spot in muga and mulberry are:
- (a) *Phylostica perseae* Ell & mart and *Cercospera moricola*.
(b) *Cilletotrichum gloeosporioiedes* and *Cerotelium fici* & *Aecidium mori*.
(c) *Pestalotiopsis desiminata* thuem and *phyllactinia corylea*.
(d) *Ceplaleros parasticus* karst and *Rosselina necotrix*.
31. _____ 0.1 % is used as foliar spray to control leaf spot diseases in mulberry.
- (a) Sulfex (b) Dithane
(c) Bavistin (d) Karathane
32. Bordeoux mixture _____ is generally used to control red rust disease in som plant.
- (a) 5 % (b) 1 %
(c) 2 % (d) 3 %
33. The temperature and humidity required for young age silkworm (1st to 3rd instant mulberry) are
- (a) 23°C – 25°C and 70 to 80% R.H (b) 24°C – 26°C and 60 to 70% R.H
(c) 26°C – 28°C and 80 to 90% R.H (d) 28°C – 30°C and 70 to 80% R.H
34. Research institute in India have recommended the use of _____ to check the incidence of grasserie, Flacherie and Muscardine.
- (a) Resham keet oustad (b) Resham keet oushadh
(c) Resham keet Astra (d) Resham keet Mustad
35. 50 Dfls of Eri silkworm can be reared comfortably in a rearing house of _____ .
- (a) 30 ft × 12 ft (b) 30 ft × 15 ft
(c) 24 ft × 12 ft (d) 24 ft × 15 ft
36. The ideal temperature and humidity required for 1st instaneri silkworm is _____ and _____ relative humidity.
- (a) 25°C to 26°C and 70 - 75% R.H (b) 25°C to 26°C and 70 - 80% R.H
(c) 26°C to 28°C and 80 - 90% R.H (d) 26°C to 28°C and 85 - 90% R.H
37. The major parasites of muga silkworm are uzifly and _____ .
- (a) *Exorista sorbillans* (b) *Apanteles glomeratus*
(c) *Nesolynx thymus* (d) *Spilomicrus karnatakensis*

38. The disease *Phyllactinia corylea* (Pers) Karst causes _____ .
(a) Leaf spot disease (b) Leaf rust disease
(c) Powdery mildew (d) Bacterial blight
39. The causal organism of leaf galls in soalu plant is _____ .
(a) *Pauropsylla niteria* (b) *Halyomorpha halys*
(c) *Pauropsylla beesoni* (d) *Pauropsylla trichopria*
40. Disinfection of rearing house in mulberry sericulture is done with 5% bleaching powder or _____ .
(a) Slaked lime (b) RKO
(c) Asthra (d) 7% formaldehyde
41. Rearing house disinfection is done _____ days before rearing is conducted.
(a) 1 to 2 days (b) 2 to 3 days
(c) 3 to 4 days (d) 4 to 5 days
42. To produce 50 litres of 5% bleaching and 0.3% slaked lime we need _____ bleaching powder and _____ slaked lime.
(a) 5 kgs and 0.300 kg (b) 2.50 kgs and 0.150 kg
(c) 0.25 kg and 0.015 kg (d) 0.50 kg and 0.030 kg
43. An area of 20 ft × 15 ft (i.e 300 Sq. ft or 28 Sq.m), the total quantity of 5% bleaching powder and 0.3% slaked lime solution required to disinfect with rearing equipment is estimated to be _____ .
(a) 100 litres (b) 70 litres
(c) 73 litres (d) 76 litres
44. LABEX contained _____ slaked lime and _____ bleaching powder.
(a) 95% and 2% bleaching powder (b) 96% and 3% bleaching powder
(c) 97% and 3% bleaching powder (d) 98% and 3% bleaching powder
45. The application of LABEX in a rearing tray per square feet is _____ .
(a) 3 - 4 grams (b) 4 - 5 grams
(c) 5 - 6 grams (d) 1 - 2 grams
46. A kilogram of bivoltine Cocoon yield about _____ of Silkworm eggs.
(a) 55 gms. (b) 45 gms.
(c) 35 gms. (d) 25 gms.
47. Fumigation of grainage house of muga, _____ litre(s) of formalin and _____ grams of potassium permanganate with _____ litre(s) of water are boiled to evaporate.
(a) 3 litres, 300 grams, 3 litres (b) 2 litres, 500 grams, 3 litres
(c) 1 litre, 400 grams, 3 litres (d) 2 litres, 400 grams, 2 litres
48. "Decol" a disinfectant though the prescription inscribe 1:49 (Decol:water), for Mizoram _____ solution is best practice.
(a) 1:40 (b) 1:30
(c) 1:35 (d) 1:47
49. "Asthra" a disinfectant for rearing house and equipment is used in _____ solution.
(a) 5% (b) 3%
(c) 0.05% (d) 0.5%
50. In muga, disease free layings produced after moth examination are dipped in 2% formalin for _____ for surface sterilisation.
(a) 20 mins (b) 15 mins
(c) 10 mins (d) 5 mins

51. Preservation of seed cocoon in muga requires _____ and _____ relative humidity.
(a) 20°C to 25°C and 70 - 75% relative humidity (b) 20°C to 24°C and 65 - 70% relative humidity
(c) 26°C to 30°C and 70 - 90% relative humidity (d) 25°C to 27°C and 65 - 85% relative humidity
52. Incubation of mulberry Dfls required _____ temperature and a relative humidity of _____.
(a) 24°C and 70% (b) 25°C and 80%
(c) 26°C and 85% (d) 23°C and 75%
53. 100 disease free layings of bivoltine pure race require about _____ of mulberry leaves.
(a) 700 kgs (b) 800 kgs
(c) 900 kgs (d) 1000 kgs
54. Out of the 4(four) hybrid mulberry dfls _____ is multivoltine races .
(a) Sk6 (b) J11₂
(c) Dun 22 (d) None of the above
55. In low temperature treatment of muga cocoons, the preservation chamber of cold storage should be reduce to 20°C after _____ from room temperature preservation.
(a) 2 hours (b) 4 hours
(c) 8 hours (d) 12 hours
56. Seed cocoon of muga should be released from cold storage by gradually increasing the temperature from _____ to _____.
(a) 2°C to 4°C (b) 5°C to 10°C
(c) 6°C to 8°C (d) 5°C to 15°C
57. In hot acid treatment of bivoltine eggs are dipped in HCL having a specific gravity of _____ at normal temperature of 25°C can be safely used.
(a) 1.0365 to 1.0462 (b) 1.0526 to 1.0612
(c) 1.6439 to 1.6621 (d) 1.071 to 1.076
58. The disease free layings/seeds so collected are soaked in _____ solution for 5 minutes to prevent contamination of germs on the egg shell etc.
(a) 5% bleaching powder (b) 2% hypochlorite
(c) 3% bleaching powder (d) 2% formaldehyde
59. For microscopic examination of mother moth, 1 to 2 drops of _____ potassium hydroxide is used.
(a) 5% (b) 4%
(c) 3% (d) 2%
60. Germ band formation generally takes place by _____ to _____ of egg laying of oviposition.
(a) 14 to 16 hours (b) 17 to 18 hours
(c) 20 to 24 hours (d) 24 to 26 hours
61. The collection of cocoon for commercial seed in muga should be collected from
(a) P4 (b) Kharaki
(c) Bharpok (d) Aherua
62. The muga Dfls so produced are transported during the
(a) Night (b) Morning
(c) Under shade (d) Cooler hours
63. The following is not included in muga grainage operation :-
(a) Selection and preservation of seed cocoon (b) Transfer of worms by kharika
(c) Moth emergence and coupling (d) Oviposition

64. The primitive streak depends, at the anterior end a _____ is formed where hibernating eggs undergo diapauses.
(a) Mesoderm (b) Microphyle
(c) Cytokinesis (d) Blastopore
65. In bivoltine acid treated eggs, hibernation of eggs for 6 months the eggs are kept in _____ for 60 days.
(a) 2.5°C (b) 5°C
(c) 7°C (d) 10°C
66. Uzi fly (*Exorista sorbillans*) is known as
(a) Madhu makhi (b) Kunji makhi
(c) Resham makhi (d) Kira makhi
67. In muga basis seed, multiplication by Central silk board technical staff is done at _____
(a) P1 (b) P2
(c) P3 (d) P4
68. Depending upon the season, moth emergence commence for _____ after spinning in muga.
(a) 14 to 55 days (b) 55 to 60 days
(c) 60 to 65 days (d) 65 to 70 days
69. In hot acid treatment of bivoltine eggs are dipped in hydrochloric acid having a specific gravity of 1.0642 at _____ .
(a) 44°C (b) 45°C
(c) 46°C (d) 47°C
70. The egg nucleus undergoes meiotic division and rejects 3 polar bodies and the sperm nucleus unite with the egg nucleus and fertilization took place. This process takes place within _____ minutes of egg layings.
(a) 30 (b) 45
(c) 50 (d) 60
71. In muga egg laying continued to 5 to 6 days but the eggs laid upto _____ days are considered for rearing.
(a) 2 (b) 3
(c) 4 (d) 5
72. Egg laying is maximum in _____ and _____ season.
(a) Autumn and spring (b) Summer and winter
(c) Winter and spring (d) Summer and Autumn
73. The emergence of moth can be synchronised by preserving the male chrysalis at _____ to _____ temperature for 3 to 4 days.
(a) 4°C to 5°C (b) 2°C to 4°C
(c) 6°C to 8°C (d) 5°C to 10°C
74. The sufficient duration of coupling in muga is
(a) 4 to 6 hours (b) 3 to 5 hours
(c) 5 to 7 hours (d) Whole night
75. A salt solution of specific gravity of _____ at room temperature is used to separate fertilised and dead eggs with low specific gravity in loose egg preparation of mulberry.
(a) 1.07 (b) 1.08
(c) 1.09 (d) 1.10