

MIZORAM PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF
JR. GRADE OF MIZORAM HORTICULTURE SERVICE
UNDER HORTICULTURE DEPARTMENT,
GOVERNMENT OF MIZORAM. OCTOBER, 2023

TECHNICAL SUBJECT PAPER-II

Time Allowed : 2 hours

Full Marks : 200

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

1. Whip tail of cauliflower occurs due to deficiency of
 - (a) Boron
 - (b) Molybdenum
 - (c) Nitrogen
 - (d) Potassium
2. Which of the following vegetable crop is adaptable to a wide range of soils from sandy loam to clayey loam?
 - (a) Lady's finger
 - (b) Pumpkin
 - (c) Bottle gourd
 - (d) Cucumber
3. A variety of potato which is popularly used for making potato chips is
 - (a) Kufri Jyoti
 - (b) Kufri Sindoori
 - (c) Kufri Chipsona
 - (d) Kufri Chandramukhi
4. This variety of tomato is suitable for tomato juice preparation.
 - (a) Arka Vikas
 - (b) Brinjal Marglobe
 - (c) Rajni
 - (d) Vaishali
5. Brinjal can be harvested at _____ days after transplanting.
 - (a) 45-50
 - (b) 55-60
 - (c) 80-90
 - (d) 90-120
6. Seed rate for cucumber is _____ for one hectare.
 - (a) 0.5 kg
 - (b) 1.0 kg
 - (c) 2.5 kg
 - (d) 4.5 kg
7. Carrot can be grown throughout the year at an elevation _____ with assured irrigation.
 - (a) below 1000 metres
 - (b) 800 - 1000 metres
 - (c) 1000 - 1500 metres
 - (d) above 1500 metres
8. Beet root seeds are sown directly in ridges at a spacing of _____.
 - (a) 5 cm
 - (b) 10 cm
 - (c) 20 cm
 - (d) 30 cm

9. In Peas cultivation, staking of the plant is ideally done on the _____ after sowing seeds.
- (a) 15th day (b) 30th day
(c) 45th day (d) 60th day
10. Irrigation should be given at regular interval because if done after a long dry spell, it results in cracking of fruits of
- (a) cucumber (b) watermelon
(c) tomato (d) pumpkin
11. Chow chow requires a well drained _____ soil for successful cultivation.
- (a) acidic (b) alkaline
(c) neutral (d) salty
12. Bush type of Lab lab or Dolichos bean can be grown during
- (a) November to January (b) March to April
(c) July to August (d) throughout the year
13. The critical period for weed competition in potato cultivation is _____ of planting and the field should be kept weed-free during that period.
- (a) 15 to 30 days (b) upto 60 days
(c) 60 to 90 days (d) 90 to 120 days
14. Spinach is a _____ crop.
- (a) short day (b) long night
(c) long day (d) day neutral
15. For long distance market, Tomatoes are harvested at a stage of
- (a) mature green (b) breaker stage
(c) vine ripe (d) red ripe
16. The ideal weight of potato seed tuber is _____.
- (a) 10-20 grams (b) 20-40 grams
(c) 30-50 grams (d) 40-50 grams
17. _____ are ready for harvest when at least half the onions in the field have their tops fallen over
- (a) Dry onions (b) Spring onions
(c) Green onions (d) Calcot
18. Bt brinjal was developed to be resistant against
- (a) Bacterial wilt (b) Jassids
(c) Nematodes (d) Fruit and shoot borer
19. Seed plot technique is related to which of the following crop?
- (a) Tomato (b) Potato
(c) Brinjal (d) Pumpkin
20. Cole crops are predominantly
- (a) Dioecious (b) Self pollinated
(c) Cross pollinated (d) Often cross pollinated

21. Tip burn of lettuce can be rectified by applying
- (a) calcium chloride (b) molybdenum
(c) magnesium sulphate (d) carbendazim
22. Photoperiodic control is an essential consideration for cultivation of
- (a) Orchids (b) Rose
(c) Chrysanthemum (d) Bird of paradise
23. Which of the following flower crop is suitable for the least capital expensive open field flower cultivation.
- (a) Gladiolus (b) Anthurium
(c) Carnation (d) Gerbera
24. Among the following, the most important concept to keep in mind while growing cut flowers is that crop selection and yield must be
- (a) climate driven (b) quality driven
(c) market driven (d) production driven.
25. Which of the following does not apply in case of commercial floriculture?
- (a) The market is developing and expecting a blast growth
(b) There are both regular and seasonal demand
(c) Duration for cultivation is longer in comparison to field crops
(d) Maximum utilization of land
26. More than 50% of the export oriented floriculture units in India are based in the
- (a) North Eastern zone (b) East zone
(c) South zone (d) West zone
27. Seed propagation is hardly possible in orchids due to
- (a) Seed coats impermeable to water (b) Chilling or low temperature requirement
(c) Seed coats impermeable to oxygen (d) Immaturity of the embryo
28. The most common physiological disorder found in carnation flower is
- (a) red rust (b) blasting of flower buds
(c) calyx splitting (d) leaf spot
29. This is considered to be the best embedding material for drying flower
- (a) Borax (b) Silica gel
(c) White sand (d) Glycerine
30. The full form of 8-HQS, commonly used in pulsing solution, is
- (a) 8-heteroquinine sulphate (b) 8-heteroquinine sodium
(c) 8-hydroxyquinoline sucrose (d) 8-hydroxyquinoline sulfate
31. Plants like ferns, anthuriums and most of the foliage plants need _____ light intensity
- (a) High (b) Low
(c) moderate (d) ample sunlight
32. The Ikebana style which is arranged in a shallow container with a needle point holder is
- (a) Bonsai (b) Moribana
(c) Nageire (d) Hikae

33. Which of the following is an example of symmetrical floral arrangement design?
(a) Right triangle (b) Round
(c) Crescent (d) Hogarth curve
34. Training plants into three-dimensional ornamental forms, such as animals, is termed as
(a) Espalier (b) Bonsai
(c) Topiary (d) Arboretum
35. To make the living area of a landscape appear larger, a designer should include plants that feature
(a) Warm coloured flowers such as red, yellow and oranges
(b) Cool coloured flowers such as blues, lavenders and purple
(c) All white flowers
(d) A combination of warm and cool colours
36. Which of the following is a cool-season grass?
(a) Carpet grass (b) Bermuda grass
(c) St. Augustine grass (d) Kentucky bluegrass
37. Bonsai is a Japanese word meaning
(a) Dwarf plant (b) Tray planting
(c) Clay planting (d) Wire planting
38. Repotting of bonsai for evergreens like pines and junipers are done in
(a) Every year (b) 1 - 2 years
(c) 3 - 5 years (d) After 10 years
39. Plants most suitable for rock gardens include
(a) Aquatic plants (b) Alpine plants
(c) Cactus (d) Climbing plants
40. The Japanese gardens are example of this style of gardening.
(a) Formal style (b) Informal style
(c) Free style (d) Water garden
41. Which among the following is not a feature of formal style of gardening
(a) Symmetrical (b) Geometric designs
(c) Straight roads (d) Naturalistic design
42. Recommendation for Anthurium cultivation is _____ shade.
(a) 50 % (b) 60 - 70 %
(c) 75 - 80 % (d) 90 %
43. The stem of cut flowers having milky exudates should be treated like this
(a) Cut stem and the end should be burnt in flame for few seconds
(b) Plug the stem with cotton wool
(c) Cut stem at sharp angle and immediately place in water
(d) Stem end split and placed in warm water
44. The oil of citronella is obtained from distillation of _____.
(a) freshly harvested leaves (b) dried leaves
(c) roots (d) stem

45. For optimum growth, vetiver plants require _____.
- (a) mild summer and cold winter (b) dry and cool climate
(c) protection from sunlight (d) plenty of sunlight
46. Patchouli is propagated by
- (a) seeds (b) leaf cutting
(c) stem cuttings (d) layering
47. Major constituent of jasmine oil is
- (a) Benzyl acetate (b) Citronellol
(c) Isohytol (d) Eugenol
48. The latex of opium poppy is obtained by making incision on the
- (a) leaf (b) stem
(c) capsule wall (d) flower stalk
49. Emulsion in water of this plant is an integral part for making gripewater used to improve digestion and to control vomiting in children.
- (a) Liqorice (b) Khasi kateri
(c) Isabgol (d) Dill
50. *Withania somnifera* is a pantropic native medicinal plant growing all over north-western and _____ parts of India.
- (a) Eastern (b) Southern
(c) North-eastern (d) Central
51. The _____ of *Piper longum* is the commercially important part of the plant.
- (a) unripe female spikes (b) ripe male spikes
(c) root bark (d) stem
52. The root of this plant contains about 55 alkaloids including reserpine which is pharmacologically important.
- (a) *Rauvolfia serpentina* (b) *Cassia angustifolia*
(c) *Catharanthus roseus* (d) *Solanum viarum*
53. For maximum oil and menthol content, Mint should be harvested on a _____.
- (a) rainy day (b) cool cloudy day
(c) dry sunny day (d) early morning
54. Rhodinol, and expensive perfumery compound is obtained from
- (a) Rose oil (b) Geranium oil
(c) Jasmine oil (d) Wild mint oil
55. *Rosmarinus officinalis* belongs to family
- (a) Lamiaceae (b) Poaceae
(c) Asteraceae (d) Geraniaceae
56. The type of eucalyptus essential oil used for children and infants is
- (a) *Eucalyptus alba* (b) *Eucalyptus radiata*
(c) *Eucalyptus globulus* (d) *Eucalyptus abdita*

57. Ceylon citronella oil obtained from-
- (a) *Cymbopogon winterianus* (b) *Cymbopogon nardus*
(c) *Cymbopogon flexuosus* (d) *Corymbia citriodora*
58. *Rheum emodi* is used in
- (a) Toothache and sore throat (b) Purgative, laxative and tonic
(c) Skin ailments (d) Septic wounds
59. Betel vine cannot tolerate this kind of soil
- (a) Acidic and neutral (b) Clay loam
(c) Saline and alkaline (d) Well drained fertile
60. Which spice crop is regarded as 'queen of spices' owing to many medicinal properties and great taste and fragrance?
- (a) Black pepper (b) Turmeric
(c) Cardamom (d) Cloves
61. The following quantity of seed rhizome is enough to plant one hectare of ginger
- (a) 10 kg (b) 100 kg
(c) 500 kg (d) 1500 to 1800 kg
62. The propagating material for Black pepper is
- (a) seeds (b) runner shoots
(c) root cuttings (d) terminal shoots
63. Clove of commerce is the dried aromatic, fully grown _____.
- (a) fully open flower (b) unopened flower buds
(c) axillary buds of the stem (d) leaf axils
64. Pungency in chilli is due to the presence of
- (a) Capsaicin (b) Capxanthin
(c) Carotenoids (d) Theanine
65. Coriander seeds are harvested when
- (a) 50% seeds turn yellow (b) all the seeds turn yellow
(c) the leaves turn yellow (d) the plant dries off
66. Fennel seed rate for direct sowing is
- (a) 1 - 2 kg/ha (b) 3 - 4 kg/ha
(c) 9 - 12 kg/ha (d) 15 - 16 kg/ha
67. The largest producer of dry ginger in the world is
- (a) China (b) India
(c) Philipines (d) Sri Lanka
68. The process of boiling fresh turmeric rhizome in water and drying in the sun, is known as
- (a) polishing (b) colouring
(c) drying (d) curing
69. Lakadong variety of turmeric has about _____ curcumin content and has very good commercial value
- (a) 5.5 % (b) 7.4 %
(c) 9.3 % (d) 12 %

70. Bleaching of betelvine leaves are done by successive heat treatment at
(a) 40 - 50°C for 6 - 8 hours (b) 40 - 50°C for 1 - 2 hours
(c) 60 - 70°C for 6 - 8 hours (d) 60 - 70°C for 1 - 2 hours
71. Ideal climate for turmeric cultivation is
(a) warm, humid climate with rainfall 1500 mm (b) dry and hot climate
(c) dry and cool climate (d) cool summer and mild winter
72. Cumin crop is not suitable in areas with _____ particularly after flowering period.
(a) cool and dry climate (b) high humidity and frequent rains
(c) saline soils (d) no irrigation
73. In the Northern hemisphere, a greenhouse should preferably located on the _____ facing slope for better illumination and protection from northerly winds.
(a) North (b) East
(c) West (d) South
74. _____ greenhouses have superior solar transmission properties, thus suitable for places having lower sunshine levels.
(a) Plastic (b) Glass
(c) Fibreglass (d) Polycarbonate
75. A _____ leads to toxicity of micronutrients and deficiency of major and secondary nutrients while a _____ causes deficiency of micronutrients.
(a) low media pH (<5.0); high pH (>7.5) (b) low media pH (<5.0); neutral pH
(c) high pH (>7.5); low media pH (<5.0) (d) high pH (>7.5); neutral pH
76. These are the most suitable kind of fertilizer for use in greenhouse fertigation.
(a) Dry fertilizers (b) Slow release fertilizers
(c) Liquid fertilizers (d) Biofertilizers
77. The most common problem among the following, in greenhouse micro-irrigation system is the _____.
(a) emitter plugging (b) chemical precipitation
(c) slime buildup in clean water (d) use of poor quality water
78. The earliest forms of greenhouses are made of this material.
(a) shade net (b) polyethylene
(c) natural fibres (d) glass
79. The potassium source that should be avoided for injection into drip irrigation systems in greenhouse, is
(a) Potassium chloride (b) Potassium nitrate
(c) Potassium sulphate (d) Potassium phosphate
80. Greenhouse media which are soilless mixes have lower nutrient holding capacity and therefore require _____.
(a) more quantity of fertilizer per dose (b) more frequent fertilizer application.
(c) less amount of fertilizer application (d) only soluble fertilizer for their nutrient supplement

81. Which of the following is not a case with greenhouse cultivation?
(a) extended growing season (b) better protection against adverse weather conditions
(c) a wide variety of plants can be grown (d) crops have greater chance of pollination
82. The part of the greenhouse structure that collects and drains rainwater and snow which is placed at an elevated level between two spans.
(a) Column (b) Gutter
(c) Purlin (d) Ridge
83. Disinfectant solution such as _____ is generally placed at the entry of the greenhouse to get rid off the pathogens from the personnel entering the greenhouses
(a) Potassium permanganate (b) Methyl bromide
(c) Formaldehyde (d) Methanol
84. Which of the following characteristics is not ideal for greenhouse media?
(a) well drained but with sufficient water holding capacity
(b) compact soil with good nutrient holding capacity
(c) free from pest and diseases
(d) rich in organic matter
85. Which among the following fruit crops is most suitable for protected cultivation?
(a) Pineapple (b) Banana
(c) Strawberry (d) Kiwifruit
86. Use of greenhouse technology started in India initially for research purpose in the year.
(a) 1970's (b) 1980's
(c) 1990's (d) 2000's
87. Protected structure protects the plants against
(a) only biotic stress (b) only abiotic stress
(c) biotic and abiotic stress (d) water stress
88. What is the ideal ratio of width and length in a naturally ventilated polyhouse?
(a) 40:60 (b) 20:10
(c) 15:25 (d) 20:80
89. The kind of crops more suitable for cultivation in protected environment is
(a) cross pollinated varieties (b) self pollinated varieties
(c) heavy feeder plants (d) crops resistant to drought
90. Windbreaks for greenhouse should be kept in the _____ side because winds coming from that direction are generally the strongest.
(a) North (b) East
(c) West (d) South
91. Mushroom spawn is a _____ growing on a sterilized grain medium.
(a) mushroom spores (b) pure mushroom mycelium
(c) elongated mushroom stem (d) mushroom rings

92. The substrate used for _____ is a partially decomposed organic matter prepared under aerobic conditions generally termed as compost.
- (a) milky mushrooms (b) paddy straw mushrooms
(c) oyster mushrooms (d) button mushrooms
93. This mushroom species is resistant to all the known mushroom viruses and to nematode.
- (a) *Agaricus bisporus* (b) *Agaricus bitorquis*
(c) *Volvariella volvacea* (d) *Volvariella esculenta*
94. Milky mushroom is
- (a) *Lentinula edodes* (b) *Stropharia rugoso-annulata*
(c) *Colocybe indica* (d) *Auricularia polytricha*
95. Mushrooms have very short shelf life and are stored _____ in paper envelopes kept in plastic bags in a refrigerator.
- (a) after thorough washing (b) without washing
(c) after chemical treatment (d) with sufficient moisture
96. The causal organism of dry bubble disease in mushroom is
- (a) *Cladobotryum dendroides* (b) *Verticillium fungicola*
(c) *Diehliomyces microsporus* (d) *Mycogone perniciosa*
97. This mushroom pest cannot be seen by naked eye, but looks like gunpowder when in mass, and mostly feed on the mycelium and attack stalk and caps.
- (a) Sciarid flies (b) Spring tails
(c) Phorid (d) Mycophagous mites
98. Wet bubble disease of button mushroom can be managed by
- (a) application of carbendazim (0.1%) in casing soil (b) low ammonia in the compost at spawning
(c) spray calcium chloride (1g/litre) (d) spray bleaching powder
99. This species of mushroom is medicinal and good for immunity and liver health, and also popular as food for their excellent flavour.
- (a) Oyster mushroom (b) Button mushroom
(c) Shiitake mushroom (d) Turkey tail mushroom
100. This oyster mushroom is known as pearl oyster owing to their colour
- (a) *Pleurotus sajor caju* (b) *Pleurotus ostreatus*
(c) *Pleurotus flabellatus* (d) *Pleurotus florida*

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