

MIZORAM PUBLIC SERVICE COMMISSION

TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF GRADE-V OF MIZORAM HORTICULTURE SERVICE UNDER GOVERNMENT OF MIZORAM. MAY, 2014

TECHNICAL SUBJECT PAPER – II

Time Allowed : 2 hours

Full Marks : 200

All questions carry equal marks of 2 each.

Attempt all questions.

1. California Wonder is a cultivar of
 - (a) Chilli
 - (b) Brinjal
 - (c) Tomato
 - (d) Capsicum
2. The most common mode of propagation in colocasia is through
 - (a) Tissue culture
 - (b) Corms
 - (c) Cormels
 - (d) Stem cutting
3. Tropical type of carrots is also known as
 - (a) European
 - (b) Asiatic
 - (c) Japanese
 - (d) None of these
4. Whiptail of cauliflower is due to deficiency of
 - (a) Water
 - (b) Molybdenum
 - (c) Boron
 - (d) Manganese
5. The pungency of chilli is due to
 - (a) Oleoresin
 - (b) Capsicin
 - (c) Capsixanthin
 - (d) Carotene
6. The characteristic odour of Garlic is due to
 - (a) Allyl propyl disulfide
 - (b) Diallyl disulfide
 - (c) Allin
 - (d) None of these
7. The lycopene pigment production in tomato fruits drops off rapidly at a temperature
 - (a) below 18°C
 - (b) between 20 to 24°C
 - (c) between 25 to 30°C
 - (d) above 27°C
8. 'Cole slaw' and 'Sauerkraut' are produced from
 - (a) Cauliflower
 - (b) Cabbage
 - (c) Broccoli
 - (d) Radish
9. Brown Heart is a common physiological disorder in
 - (a) Cucumber
 - (b) Pointed gourd
 - (c) Radish
 - (d) Water melon

10. Golden Acre and Pride of India are cultivars of
(a) Cabbage (b) Cauliflower
(c) Knolkhol (d) Broccoli
11. Vine cutting and root suckers are propagating materials in which of the following crops?
(a) Water melon (b) Pointed Gourd
(c) Spinach (d) Ridge Gourd
12. Half slip and full slip are maturity indices in which of the following vegetables?
(a) Water melon (b) Musk melon
(c) Round melon (d) None of these
13. Winged bean is
(a) *Vicia faba* (b) *Phaseolus lunatus*
(c) *Cyamopsis tetragonoloba* (d) *Psophocarpus tetragonolobus*
14. Sweet potato is commonly propagated by
(a) Tuber (b) Vine cutting
(c) Root (d) None of these
15. Proper seed germination of bitter gourd will take place at a temperature
(a) below 8°C (b) between 10° and 20°C
(c) between 25° and 35°C (d) above 40°C
16. The edible part of broccoli is known as
(a) Curd (b) Knob
(c) Head (d) Shoot
17. 'Seed Plot Technique' in potato cultivation was developed in order to
(a) avoid aphid problem (b) obtain early-maturing crops
(c) obtain high-starch contents (d) all of these
18. Black Heart disease of potato is due to
(a) High storage temperature (b) N deficiency
(c) B deficiency (d) Chilling injury
19. All cole crops originated from a wild plant
(a) *Brassica oleraceae var. sylvestris* (b) *Brassica oleraceae var. botrytis*
(c) *Brassica oleraceae var. gemmifera* (d) *Brassica oleraceae var. acephala*
20. Lettuce cultivation is done best in cool environment. High temperature is not suitable because
(a) it promotes seed stalk (b) it causes bitter taste of leaves
(c) it induces tip-burn injury (d) all of these
21. Watermelon without seeds are
(a) Haploid (b) Diploid
(c) Triploid (d) Tetraploid
22. Blossom end rot of tomato is due to deficiency of
(a) B (b) Mo
(c) Mn (d) Ca

23. The edible portion of knolkhol is
(a) Curd (b) Knob
(c) Head (d) None of these
24. A garden of naturalistic design in which irregular massing of the landscape elements predominates is
(a) Formal design (b) Informal design
(c) Picturesque (d) Modern design
25. Open spaces decorated with ornamental plants and other design, shape and structure and which are situated usually on the cross section or junction of roads are called
(a) Boulevard (b) Traffic islands
(c) Miniature gardens (d) Topiaries
26. Following garden type is also known as 'alpine garden'.
(a) Water garden (b) Terrace garden
(c) Sunken garden (d) Rock garden
27. A sophisticated assymetrical design of flower arrangement that has an outline of an 'S' is called
(a) Circular (b) Radiating
(c) Crescent (d) Hogarthian curve
28. The Japanese flower arrangement called 'Ikebana' literally means
(a) Flowers kept alive (b) Expressing nature aesthetically
(c) Sky, earth and mankind (d) Well balanced expression
29. In bonsai culture, repotting is usually done in different boxes in the following order
(a) training boxes, growing boxes and final presentation pot.
(b) presentation boxes, growing boxes and training boxes.
(c) growing boxes, training boxes and final presentation pot.
(d) growing boxes, presentation pot and training boxes.
30. The spikes of cut flowers like gladiolus, antirrhinum, etc are sensitive tobending and hence must be stored and transported in upright position.
(a) Phototropic (b) Geotropic
(c) Chemical induced (d) Metal affected
31. Fading of Spathe colour in Anthurium is due to deficiency of
(a) N (b) P
(c) Mg (d) Ca
32. Seeding, turfing, plastering and dibbling are the most common methods of planting
(a) Plants in rockery (b) Grasses in lawns
(c) Lotuses in water gardens (d) Climbers in walls
33. Growing of indoor plants and cacti and succulents in a covered glass-case is known as
(a) Moribana (b) Pergola
(c) Pot-pourri (d) Terrariums
34. Which one of the following is paired correctly?
(a) Palms – flowers and seeds; Ferns – spores; Cycads - cones
(b) Palms – spores; Ferns – cones; Cycads – flowers and seeds
(c) Palms – cones; Ferns – spores; Cycads – flowers and seeds
(d) Palms – flowers and seeds; Ferns – cones; Cycads - spores

35. Calyx splitting is a major physiological disorder in which of the following crops?
(a) Chrysanthemum (b) Carnation
(c) Rose (d) Anthurium
36. The major floriculture product exported from India comprises of
(a) Fresh cut flowers (b) Dry flowers
(c) Live plants (d) Fresh bulbs
37. The absorption of chemical solution containing sugar and germicides through flower stem, which is especially beneficial for flowers destined for long periods of storage or long distance transportation, is
(a) Conditioning (b) Bud-opening
(c) Pulsing (d) Bunching
38. Which of the following is the most widely grown Orchid genus in north-eastern Himalayan region?
(a) *Dendrobium* (b) *Cymbidium*
(c) *Oncidium* (d) *Cattleya*
39. The most popular method of multiplying roses is through
(a) Seed propagation (b) Micro-propagation
(c) T-budding (d) Root cutting
40. Which of the following is a cause of deterioration of harvested flowers?
(a) Bacterial and fungal infections (b) Plugging of xylem vessels
(c) Mechanical injury (d) All of these
41.orchids have horizontal growth habit and the new growth develops from rhizomes.
(a) Monopodial (b) Sympodial
(c) Pseudomonopodials (d) None of these
42. Which of the following is not a method of precooling of flowers?
(a) Forced air cooling (b) Hydrocooling
(c) Vacuum cooling (d) Chemical cooling
43. Who is known as the father of modern medicines?
(a) Samuel (b) Pellatier
(c) Hippocrates (d) Sertuner
44. Source of costus oil is
(a) *Saussurea costus* (b) Lemon grass
(c) Citronella (d) *Nardostachys jatamansi*
45. The plant also known as Indian ginseng is
(a) *Nardostachys jatamansi* (b) *Withania somnifera*
(c) *Rauvolfia serpentina* (d) None of these
46. Trade of following plant or plant parts collected from wild is not permitted since it is included in CITES Appendix - I
(a) *Saussurea costus* (b) *Dioscorea deltoidea*
(c) *Aloe barbadensis* (d) *Gnetum montanum*
47. The plant portion of commercial importance in *Withania somnifera* is the
(a) Leaf (b) Stem
(c) Berry (d) Roots

48. The emulsion of this plant in water is an integral part for making gripe water used to improve digestion and to control vomiting in children.
- (a) Guggal (b) Senna
(c) Dill or sowa (d) Liquorice
49. Isabgol (*Plantago* sp.) is predominantly grown as a crop.
- (a) Warm season (b) Cold season
(c) Dry area (d) High humidity
50. The berry pulp of following plant is rich in solasodine alkaloid, which is a starting chemical for production of steroids.
- (a) *Piper longum* (b) *Solanum viarum*
(c) *Withania somnifera* (d) *Plantago ovata*
51. This crop is grown under an annually renewable license issued by the Union Narcotics Department, in designated areas of Madhya Pradesh, Rajasthan and Uttar Pradesh.
- (a) Asgand (b) Rauwolfia
(c) Palmarosa oil grass (d) Opium poppy
52. Commercial propagation for Periwinkle is mainly through
- (a) Seed (b) Stem cutting
(c) Root cutting (d) Tissue-culture
53. The economic part of *Rauwolfia serpentina* containing at least 55 alkaloids is
- (a) Leaves (b) Stem
(c) Roots (d) Seeds
54. The absolute extracted through solvent extraction of French jasmine flower is traded as
- (a) Bricks (b) Concrete
(c) Oils (d) Powder
55. The of Indian basil is used in flavouring of foods, bakery products and beverages
- (a) Seeds (b) Roots
(c) Oil (d) Bark
56. The leaves ofcontain an aromatic oil, with a characteristic lemon-like odour, containing 75 to 80% citral.
- (a) *Apium graveolens* (b) *Ocimum basilicum*
(c) *Cymbopogon winterianus* (d) *Cymbopogon flexuosus*
57. The most popular variety of among Indian farmers is Shivalik.
- (a) Lemon grass (b) Mint
(c) Citronella (d) Celery
58.is cultivated for its highly fragrant leaves which contain a very sweet smelling oil of lasting stickly odour with good blending properties.
- (a) Patchouli (b) Chamomile
(c) Kewada (d) Vetiver
59. The largest producer, consumer and exporter of spices in the world is
- (a) Sri Lanka (b) India
(c) Pakistan (d) Afghanistan

60. Following plant is known as 'queen of spices'
- (a) Black pepper (b) Large cardamom
(c) Small cardamom (d) Coriander
61. The major export destination of ginger from NE India is
- (a) Myanmar (b) Bangladesh
(c) China (d) Thailand
62. The berries of black pepper mature and become ready for harvesting in
- (a) 60 to 90 days (b) 100 to 150 days
(c) 180 to 200 days (d) 210 to 250 days
63. Commercial propagation of large cardamom is through
- (a) Seeds (b) Suckers
(c) Stem cuttings (d) Air layering
64. 'Navashree' and 'Nithyashree' are commercial varieties of
- (a) Cinnamon (b) Betelvine
(c) Fenugreek (d) Nutmeg
65. The plant part of commercial value in Clove is the dried, aromatic and fully grown
- (a) seeds (b) unopened flower buds
(c) opened flowers (d) fully ripe fruits
66. The seeds of coriander should be harvested when
- (a) seeds are fully dried (b) 50% of the seeds dry up
(c) entire seeds turn yellow (d) 50% seeds turn yellow
67. The alkaloid responsible for its biting taste of Black pepper is
- (a) Piperine (b) Oleoresin
(c) Curcumin (d) Tumerol
68. Colouring and polishing are two important post harvest operations in which of the following spices?
- (a) Black pepper (b) Turmeric
(c) Vanilla (d) Betel Vine
69. The most widely cultivated Chilli type in Mizoram is
- (a) Red pepper (b) Naga king chilli
(c) Sweet pepper (d) Bird-eye chilli
70. The costliest spice in the spice horizon is
- (a) Saffron (b) Vanilla
(c) Small cardamom (d) None of these
71. Rajendra Swathi is an improved variety of
- (a) Cumin (b) Fenugreek
(c) Fennel (d) Coriander
72. Bleaching is an important operation followed in
- (a) Black pepper (b) Betel vine
(c) Fennel (d) Ginger
73. Trashing is an important operation in the cultivation of
- (a) Cardamom (b) Clove
(c) Turmeric (d) Black pepper

74. Which of the following is prepared after removing outer pericarp of black pepper berries?
(a) White pepper (b) Brown pepper
(c) Green pepper (d) Red pepper
75. The main disadvantage of using glass house as a greenhouse is
(a) highly affected by weather fluctuations
(b) it have a short life span
(c) it requires regular cleaning to maintain maximum light transmission
(d) all of these
76. Regardless of the basic design, greenhouse must receive a minimum ofhours of unobstructed light during the winter months
(a) 3 to 4 (b) 5 to 6
(c) 7 to 8 (d) 10 to 11
77. Slow-rooting cuttings are kept alive for a long period of time, giving them a chance to root before they die from desiccation, through
(a) Hot beds (b) Cold frames
(c) Net houses (d) Intermittent mist
78. The temperatures inside greenhouses arethe ambient temperature.
(a) lesser than (b) higher than
(c) similar to (d) cannot be specified
79. This is initiated by the National Horticulture Board, it helps to decide the confinement according to its value and demand in different places
(a) Market bulletin (b) Co-operative organization
(c) Market survey (d) Market intelligence information
80. A flexible pouch capable of withstanding autoclavable temperature (about 120°C) when food products are packed and sealed inside them
(a) Retortable pouches (b) Aseptic package
(c) Tetra packs (d) Polyethylene
81. In Green House, the most suitable cladding material is polythene of thickness
(a) 0.10-0.15 mm (b) 10-15 mm
(c) 2.0-3.0 mm (d) None of these
82. Forcing of plants to flower in a particular flush is done mainly to
(a) increase seed production (b) promote vegetative growth
(c) get good quality fruits (d) avoid incidence of pests
83. High production in protected cultivation is due to
(a) high photosynthetic efficiency (b) high temperature
(c) high oxygen level (d) all of these
84. The following type of irrigation is suitable for undulating topography and also popular in greenhouses
(a) Sprinkler method (b) Check basin system
(c) Furrow method (d) Flooding
85. The principal nutrient applied through fertigation in greenhouse cultivation is
(a) Nitrogen and sulphur (b) Nitrogen and potassium
(c) Phosphorus and potassium (d) Phosphorus and sulphur

86. Growth regulator commonly used for fruit thinning is
(a) IAA (b) GA
(c) Ethylene (d) NAA
87. Out of the total mushroom production in India, which of the following spp. comprises more than 90% production?
(a) *Agaricus spp.* (b) *Pleurotus spp.*
(c) *Volvariella spp.* (d) *Auricularia spp.*
88. Mushroom spawn is a pure mushroomgrowing on sterilized grain medium.
(a) Spore (b) Hypha
(c) Mycelium (d) Seed
89. The Directorate of Mushroom Research (ICAR) is situated in
(a) Shimla (b) Solan
(c) Delhi (d) Shillong
90. If button mushrooms are allowed to grow further to reveal pink gills due to ruptured veil, they are known as
(a) Cup (b) Saucer
(c) Flower (d) Buds
91. *Pleurotus spp.* is a type of
(a) Shiitake mushroom (b) Paddy straw mushroom
(c) Oyster mushroom (d) Milky mushroom
92. *Lentinula edodes*, a culinary medicinal mushroom is
(a) Shiitake mushroom (b) Paddy straw mushroom
(c) Oyster mushroom (d) Milky mushroom
93. The mushroom characterized by a milky large sporophore and having delicious flavour is
(a) *Pleurotus spp.* (b) *Colocybe indica*
(c) *Lentinula edodes* (d) *Volvariella volvacea*
94. The first edible mushroom cultivated in India was
(a) Paddy straw mushroom (b) Oyster mushroom
(c) Shiitake mushroom (d) White button mushroom
95. Yellow mould disease of mushrooms is caused by
(a) *Myceliophthora lutea* (b) *Mycogone pernicioso*
(c) *Verticillium fungicola* (d) *Cladobotrym dendroides*
96. Mushroom is specially recommended food for diabetic patients because of
(a) low fat and low protein content
(b) low calorific food with no cholesterol and no starch
(c) good source of vitamins but low in minerals
(d) low fibre and high sodium contents
97. The temperature requirement for cultivation of oyster mushroom is
(a) 16° to 20°C (b) 25° to 30°C
(c) 28° to 34°C (d) 32° to 38°C

98. Which of the following is the best medium for growing cultures of Oyster and Paddy straw mushroom?
- (a) PDA (b) Sucrose
(c) Na Benzoate (d) MS media
99. The mushroomis resistant to all the known mushroom viruses and to nematode *Apenchoides sacchari*.
- (a) *Agaricus bisporus* (b) *Agaricus bitorquis*
(c) *Pleuratus ostreatus* (d) *Pleuratus florida*
100. The green mould disease of mushroom caused by *Trichoderma spp.* can be controlled by
- (a) proper pasteurization (b) fungicidal sprays
(c) conditioning of compost (d) all of these

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