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 18ºC
   (b) between 20 to 24ºC
   (c) between 25 to 30ºC
   (d) above 27ºC

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 8ºC (b) between 10º and 20ºC
   (c) between 25º and 35ºC (d) above 40ºC

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 oleracea var. sylvestris (b) Brassica oleracea var. botrytis
   (c) Brassica oleracea var. gemmifera (d) Brassica oleracea 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 to ……bending 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) Pseudomonopodial  (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) Hippocratus  (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) Rauvolfia  
   (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 of ...............contain 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 Shiwalik.
   (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 sticky 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 of ..............hours 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 dessication, through
   (a) Hot beds  (b) Cold frames  
   (c) Net houses  (d) Intermittent mist

78. The temperatures inside greenhouses are .............the 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.*  
   (b) *Volvariella spp.* (d) *Auricularia spp.*

88. Mushroom spawn is a pure mushroom ............growing 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 perniciosa*  
   (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) 16º to 20ºC  (b) 25º to 30ºC  
   (c) 28º to 34ºC (d) 32º to 38ºC
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 mushroom ..........is 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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