

# MIZORAM PUBLIC SERVICE COMMISSION

## TECHNICAL COMPETITIVE EXAMINATIONS FOR RECRUITMENT TO THE POST OF SENIOR HORTICULTURE DEMONSTRATOR UNDER HORTICULTURE DEPARTMENT, APRIL, 2018

### HORTICULTURE PAPER - I

Time Allowed : 2 hours

Full Marks : 150

*All questions carry equal marks of 2 each.*

*Attempt all questions.*

1. Fruits and vegetables are known as protective food as they are rich in
  - (a) Vitamins and minerals
  - (b) Proteins and minerals
  - (c) Vitamins and fats
  - (d) Fats and minerals
2. The development of horticulture is often called as
  - (a) Green Revolution
  - (b) Golden Revolution
  - (c) Blue Revolution
  - (d) White Revolution
3. Which of the following fruit crop accounts for the highest production share in India
  - (a) Grapes
  - (b) Citrus
  - (c) Mango
  - (d) Banana
4. Which of the following spice crop accounts for the highest production share in India
  - (a) Chillies
  - (b) Ginger
  - (c) Garlic
  - (d) Turmeric
5. Which of the following commodities accounts for the highest share in exports from India
  - (a) Mango pulp
  - (b) Fresh Onions
  - (c) Fresh Grapes
  - (d) Dried and preserved vegetables
6. The highest producer of apple in the India is
  - (a) Himachal Pradesh
  - (b) Arunachal Pradesh
  - (c) Jammu & Kashmir
  - (d) Uttarakhand
7. The highest importer of potato from India is
  - (a) Nepal
  - (b) Russia
  - (c) Sri Lanka
  - (d) Mauritius
8. The highest Vitamin C content is found in
  - (a) Aonla
  - (b) Guava
  - (c) Citrus
  - (d) Barbados cherry
9. Dry Karonda is the richest source of iron followed by
  - (a) Datepalm
  - (b) Walnut
  - (c) Cashewnut
  - (d) Oilpalm

10. The highest carbohydrate content is found in
  - (a) Cassava
  - (b) Sweet potato
  - (c) Garlic
  - (d) Yam
11. The Indian Council of Agricultural Research (ICAR), New Delhi recognises how many agroclimatic zones for effective land-use planning
  - (a) 6
  - (b) 12
  - (c) 7
  - (d) 8
12. Which of the following is not a subtropical zone fruit crop
  - (a) Kiwi
  - (b) Litchi
  - (c) Passion fruit
  - (d) Rambutan
13. Tropical fruit plants are
  - (a) Generally deciduous and moderately sensitive to cold
  - (b) Generally evergreen and extremely sensitive to cold
  - (c) Deciduous and generally grown in regions falling between the Tropic of cancer and Tropic of Capricorn
  - (d) Generally evergreen and not sensitive to cold
14. Which of the following fruit crop thrives well in arid and semi arid climatic zones
  - (a) Mango
  - (b) Pomegranate
  - (c) Pomelo
  - (d) Banana
15. Which one of the following pairs is not correctly matched
  - (a) Mango : High rainfall
  - (b) Dragonfruit : low sunshine
  - (c) Dates : Less rainfall
  - (d) Anthurium : Reduced light intensity
16. The optimum temperature requirement of tomato is
  - (a) 18°C - 30°C
  - (b) 15°C - 18 °C
  - (c) 20°C - 24°C
  - (d) 25°C - 30°C
17. The optimum soil pH for cabbage is
  - (a) 5.5 – 6.5
  - (b) 4.5 - 5.5
  - (c) 7.0 -7.5
  - (d) 6.5- 6.8
18. Though there is variation with cultivar, age and climate, Anthurium generally requires \_\_\_\_\_ shade for healthy growth
  - (a) 75%
  - (b) 25%
  - (c) 50%
  - (d) 65%
19. Arecanut flourishes well at a temperature range of
  - (a) 25 – 30°C
  - (b) 15 – 25°C
  - (c) 14 - 36°C
  - (d) 30 – 40°C
20. The mean temperature requirement of banana for its optimum growth is
  - (a) 15- 18 °C
  - (b) 20 - 30°C
  - (c) 25 - 35°C
  - (d) 15 - 20°C
21. Mango is grown best in regions having an annual rainfall of
  - (a) 150 – 180 cm
  - (b) 80 – 100 cm
  - (c) 125 – 200 cm
  - (d) 25 – 250 cm

22. For normal growth and development of most fruit crops, soil depth should be  
(a) 0.5 m (b) 2.0 m  
(c) 1 m (d) 1.5 m
23. Which amongst the following horticultural crops has the least salt tolerance  
(a) Pomegranate (b) Guava  
(c) Citrus (d) Aonla
24. Citrus, banana, sapota and mango grow well on  
(a) Arid soils (b) Alluvial soils  
(c) Laterite soils (d) Black soils
25. Which one of the following crops grows well on lateritic soil  
(a) Cashewnut (b) Ber  
(c) Mango (d) Black pepper
26. Tarai soils favour the growth of  
(a) Grasses (b) Coconut  
(c) Coffee (d) Aonla
27. Water table should be below \_\_\_\_\_ at all times of the year for good aeration and adequate drainage  
(a) 1 m (b) 2 m  
(c) 1.5 m (d) 0.8 m
28. Planting distance for citrus is generally  
(a) 4.5m x 4.5 m (b) 6.5m x 6.5m  
(c) 4.5m x 5.5m (d) 5 - 6 m x 5 - 6 m
29. Wind breaks are planted to  
(a) Protect orchards from high velocity winds which could cause uprooting of trees, breaking of branches, fruit drop etc  
(b) Keep out animals and trespassers and to prevent pilferage  
(c) Protect the orchard from hot winds  
(d) Provide natural fencing to the orchard
30. Which one of the following is not used as a windbreak  
(a) Eucalyptus (b) *Artocarpus hirsute*  
(c) *Opuntia sp* (d) *Carissa carandas*
31. In a Quincunx planting system, if the distance between the ends of each square is 10 m, then the total plant population for 1 Ha area is  
(a) 100 (b) 200  
(c) 181 (d) 220
32. Which of the following is also known as 'Septule System' of planting  
(a) Hexagonal (b) Square  
(c) Rectangular (d) Quincunx
33. When crops of different height, rooting pattern and duration are grown simultaneously on the same piece of land for efficient utilization of vertical space and trapping of solar radiation, the system of cropping is called as  
(a) Ratoon cropping (b) Relay cropping  
(c) Multi-tier cropping (d) Mixed cropping

34. System of planting fruit trees along with forest trees is known as  
(a) Agri-Horti system (b) Horti-Silvicultural system  
(c) Horti-Silvi-Pastoral system (d) Agri-Hort-Silvicultural system
35. Which of the following physical methods of weeding leaves the lower part of the weed undamaged and hence is not useful for weeding of crops regenerated by roots, tubers, rhizome etc  
(a) Digging (b) Mowing  
(c) Cheering (d) Burning
36. Which of the following chemical weedicide is specifically used for control of weeds with narrow leaves  
(a) Metribuzin (b) 2,4-D  
(c) Treflan (d) Glyphosate
37. Which amongst the following is not a macro-nutrient  
(a) Ca (b) B  
(c) Mg (d) S
38. Single Super Phosphate (SSP) fertilizer contains  
(a) 16 % P and 12 % S (b) 32 % P and 4 % S  
(c) 18 % P and 10 % S (d) 46 % P and 3 % S
39. A hormone used as a herbicide  
(a) 2,4-D (b) IAA  
(c) Ethrel (d) Giberellei acid
40. Micronutrients are generally applied through  
(a) Localized placement (b) Foliar application  
(c) Pellet placement (d) Fertigation
41. Besides fluctuations in temperature, soil and air moisture content, cracking in litchi can also occur due to deficiency of  
(a) Z (b) B and Ca  
(c) N (d) None of these
42. Drip irrigation is more suitable for  
(a) Fruit crops (b) Vegetable crops  
(c) Aromatic and medicinal plants (d) Annual flowers
43. Annual water requirement of onion is  
(a) 900 – 1200 mm (b) 1000 – 1150 mm  
(c) 350 – 500 mm (d) 350 – 550 mm
44. The most preferred system of irrigation in rose is  
(a) Sprinkler (b) Drip irrigation  
(c) Bubbler system (d) All of these
45. To ensure good crop, pineapple should be irrigated during hot months at an interval of  
(a) 5 – 10 days (b) 28 – 30 days  
(c) 20 – 25 days (d) 10 – 15 days
46. Which amongst the following has poor salt tolerance  
(a) Avocado (b) Date palm  
(c) Olive (d) Pomegranate

47. When stamens and carpels of a flower mature at the same time it is known as  
(a) Cleistogamy (b) Homogamy  
(c) Allogamy (d) Dichogamy
48. Acetocarmine test is done to analyse  
(a) Photosynthetic rate (b) Seed viability  
(c) Pollen viability (d) None of these
49. Under north Indian conditions, mango starts flowering during  
(a) March - April (b) Late April  
(c) December - January (d) Late January - early February
50. Which of the following is associated with unfruitfulness  
(a) Duodichogamy (b) Protandry  
(c) Monoecy (d) All of these
51. There is heavy drop of hermaphrodite flowers and young fruits amounting to 99% or more in  
(a) Mango (b) Papaya  
(c) Bael (d) Sapota
52. Translocation of water and nutrients from roots to above ground parts of plants takes place through  
(a) Phloem (b) Xylem  
(c) Vascular bundles (d) Cambium
53. The required dose of 2,4-D for control of pre-harvest drop in Mandarin orange is  
(a) 5 ppm (b) 20 ppm  
(c) 10 ppm (d) 35 ppm
54. Which of the following types of storage works on the principle of evaporative cooling effect of water  
(a) Hypobaric Storage (b) Pit Storage  
(c) Zero Energy Cool Chamber (d) Modified Atmospheric Storage
55. Peak harvesting time of pineapple in Mizoram is  
(a) May - June (b) April - May  
(c) November - December (d) July- August
56. Roses are best harvested  
(a) In the evening (b) At night  
(c) In the morning (d) In the afternoon
57. The established way for evaluating maturity in tomato is  
(a) Scale of fruit surface (b) Astringency  
(c) Colour (d) Waxiness
58. Which of the following is used for harvesting grape bunches  
(a) Scissor (b) Secateur  
(c) Sickle (d) Knife
59. The concentration of salt used for preservation of food is  
(a) 15 – 20% (b) 1 - 2 %  
(c) 2 – 5 % (d) 5 – 10 %

60. The most widely used chemical used for suppressing sprouts in tomato is
- (a) Maleic hydrazide (MH)
  - (b) Benzyl adenine (BA)
  - (c) Methyl naphthaleneacetic acid (MENA)
  - (d) 3- chloroisopropyl-N-phenylcarbamate (CIPC)
61. Passion fruit can be properly stored for 3 weeks when stored at
- (a) 5.6 – 7.2°C & 85 - 90% RH
  - (b) 0 – 1.7°C & 75 - 80% RH
  - (c) 2 – 5°C & 90 -95% RH
  - (d) 11.5 – 12°C & 85 -90% RH
62. The chemical commonly used for products having natural colours such as anthocynin pigmnet is
- (a) Acetic acid
  - (b) Sorbic acid
  - (c) KMS
  - (d) Sodium Benzoate
63. A distinct sound of grains cracking inside when slightly pressed from outside is a good maturity index for
- (a) Jackfruit
  - (b) Banana
  - (c) Pomegranate
  - (d) Sapota
64. Which of the following propagation method is used for repairing damaged woods near the collar region
- (a) Bridge grafting
  - (b) Tongue grafting
  - (c) Cleft grafting
  - (d) Whip grafting
65. In acid scarification of seeds, seeds are placed in containers and covered with conc.H<sub>2</sub>SO<sub>4</sub> or HCl in the ratio of
- (a) 2 parst seed and 1 part acid
  - (b) 1.5 parst seed and 2 parts acid
  - (c) 1 part seed and 2 parts acid
  - (d) 0.5 part seed and 3 parts acid
66. The usual stratification temperature for breaking of seed dormancy is
- (a) 0 - 2°C
  - (b) 8 – 10 °C
  - (c) 5 – 8 °C
  - (d) 4 – 7 °C
67. Graft incompatibility occurs because of
- (a) Adverse physiological responses between the grafting partners
  - (b) Virus or phytoplasma transmission
  - (c) Anatomical abnormalities of vascular tissue in the callus bridge
  - (d) All of these
68. The introduction of a suitable interstock overcomes the incompatibility of scion and rootstock in
- (a) Translocated incompatibility
  - (b) Delayed incompatibility
  - (c) Localized incompatibility
  - (d) Pathogen induced incompatibility
69. The commonly used citrus rootstock for mandarin orange in Mizoram is
- (a) Rough lemon
  - (b) Troyer Citrange
  - (c) Cleopatra
  - (d) None of these
70. Which of the following commercial cultivar is a budsport or that has arisen out of bud mutation
- (a) Ruby Red of Grapefruit
  - (b) Allahabad Safeda og Guava
  - (c) Red Lady of Papaya
  - (d) Arka Samrat of tomato

71. Clonal propagation in banana is mainly done using  
(a) Callus culture (b) Meristem culture  
(c) Cell culture (d) Embryo culture
72. True Potato Seed (TPS) seed rate is  
(a) 250 – 500 g/ Ha (b) 50 – 100 g/Ha  
(c) 100 – 120 g/Ha (d) None of these
73. The commercial method of propagation in rose is  
(a) T-budding (b) Root cutting  
(c) Stem cuttings (d) All of these
74. Lotus seed germinate after  
(a) 50 – 60 days (b) 150 – 200 days  
(c) 200 – 250 days (d) 20 – 30 days
75. The most preferred period for budding of Mandarin orange in Mizoram is  
(a) September (b) February  
(c) August (d) April

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