

FLORICULTURE AT A GLANCE

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EXERCISE

A. Multiple Choice Questions

- Which garden is regarded as genesis of gardening?
(a) Hampshire (b) Osaka
 (c) Eden (d) Brindavan
- Osaka garden is located in which of following country?
(a) China (b) South Korea
 (c) Japan (d) UK
- Vatsyana did not describe which of following garden.
(a) Pramadodyan (b) Nandanvana
 (c) Passage garden (d) Vrikshavatika
- Gardens at Nalanda and Takshshila were developed during the period of
(a) Mughal (b) Aryan
 (c) Budhist (d) None of above
- First Islamic garden in India was developed by
 (a) Ferozshah (b) Jahangir
(c) Akbar (d) Babur
- The paradise garden 'Char Bagh' is situated in which of following country.
(a) Turkey (b) Iran
(c) Pakistan (d) India
- Bagh-e-wafa and Bagh-e-kakan gardens were developed by
(a) Ferozshah (b) Babur
(c) Akbar (d) Humayun
- Taj Mahal was built by
(a) Nur Jahan (b) Shah Jahan
(c) Jahangir (d) Akbar
- Dilkusha garden of Lahore was built by
(a) Shah Jahan (b) Jahangir
(c) Fadai Khan (d) Akbar
- Moorish garden style was developed in
(a) France (b) Germany
 (c) Spain (d) Iran
- Baradari garden of Patiala was developed by
 (a) Bhupinder Singh (b) Ranjeet Singh
(c) Fadai Khan (d) Sansaar Chand
- Royal Botanic garden of Kew is located in
(a) USA (b) England
(c) Australia (d) Germany
- Missouri Botanical garden is located in USA at
 (a) St. Louis (b) California
(c) Boston (d) New York

14. First Botanical garden in the world was started at Venice in Italy during
- (a) 1621
(c) 1759
(b) 1543
(d) 1840
15. Oldest Botanical garden in Europe is at Leyden in
- (a) Germany
(c) Spain
(b) Netherlands
(d) France
16. Baradari is an important feature of which garden.
- (a) Mughal
(c) English
(b) French
(d) Chinese
17. During the period of Henry-III gardens in England were of style.
- (a) Formal
(c) Wild
(b) Informal
(d) Free
18. Which of following is not included in Japanese gardens?
- (a) Tea garden
(c) Flat garden
(b) Hill garden
(d) Vertical garden
19. Baradari is a canopied structure with doors.
- (a) 10
(c) 12
(b) 6
(d) 8
20. Rashtrapati Bhavan garden at New Delhi was laid out by
- (a) Sir Edwin Lutyens
(c) Shah Jahan
(b) Lord Curzon
(d) Lady Hardinge
21. Sir William Robinson was the first person to develop gardening.
- (a) Free
(c) Formal
(b) Wild
(d) Informal
22. In which style all types of garden are mixed to secure a picturesque effect.
- (a) wild
(c) Informal
(b) Free
(d) All of above
23. In redefining English gardens from picturesque to natural style of gardening, who was not associated?
- (a) W Kent
(c) Queen Elizabeth. I
(b) L Brown
(d) H Repton
24. Who gave the inspiration through his paintings for informal gardening?
- (a) W Robinson
(c) C Lorrain
(b) H Hoare
(d) Le Notre
25. For which style of gardening first plan is made on paper and then executed in field?
- (a) Free
(c) Formal
(b) Wild
(d) Informal
26. In which style of gardening plan is forced to fit the land for securing natural beauty.
- (a) Wild
(c) Informal
(b) Formal
(d) None of above

27. Which plant is grown to symbolize death and eternity by Mughals?
 (a) Cypress (b) Kachnar
 (c) Chenar (d) Peach
28. The art of Indian style gardening reached Japan by
 (a) Buddhist Monks (b) Chinese
 (c) Prof. H. Mori (d) English trackers
29. Which of following is associated with life of Lord Budha?
 (a) *Saraca indica* (b) *Shorea robusta*
 (c) *Butea monosperma* (d) All of these
30. Cottage gardens in England were developed by
 (a) Le Notre (b) G. Jekyell
 (c) W. Robinson (d) W. Kent
31. Sayaji park in Baroda was built during
 (a) 1781 (b) 1879
 (c) 1872 (d) 1805
32. Baroda museum and planetarium are opened in Sayaji park during
 (a) 1879 (b) 1872
 (c) 1894 (d) 1878
33. *Hybaena thebaica* a branching palm is located in
 (a) Bombay (b) Baroda
 (c) Coimbatore (d) Bangalore
34. Mandhor garden of Jodhpur was established by
 (a) Ranjeet Singh (b) Abhai Singh
 (c) Fadai khan (d) None of above
35. Mughal garden at Pinjore was laid out by
 (a) Fadai Khan (b) Brajendra Singh
 (c) Aurangjeb (d) Ranjeet Singh
36. Roshnara park in New Delhi was laid out by a Japanese expert.
 (a) Prof. K Mori (b) Heian
 (c) Nara (d) Muromachi
37. Which of following belong to Japanese style.
 (a) Roshnara park (b) Budha Jayanti park
 (c) PM house at Safdarjung (d) All of these
38. Botanic garden, Forest Research Institute, Dehradun was started in
 (a) 1934 (b) 1886
 (c) 1878 (d) 1894
39. Who was first Mughal emperor to visit Kashmir?
 (a) Jahangir (b) Babur
 (c) Akbar (d) None of these
40. Shalimar garden in Kashmir was laid out during the regime of
 (a) Jahangir (b) Akbar
 (c) Zafar Khan (d) Nur Jahan

41. Asaf Jahan brother of Nur Jahan built the garden of
 (a) Nishat bagh (b) Chasma-e-Shahi
 (c) Achhabal (d) Verinag
42. Chasma-e-Shahi garden was built by
 (a) Fadai Khan (b) Ali Mardan Khan
 (c) Ranbir Singh (d) None of above
43. Verinag garden was started by
 (a) Shah Jahan (b) Akbar
 (c) Jahangir (d) Nur Jahan
44. Achhabal garden was built by..... in 1620.
 (a) Nur Jahan (b) Shah Jahan
 (c) Jahangir (d) None
45. Bijbehara garden was constructed by
 (a) Shah Jahan (b) Dara Shikoh
 (c) Maharaja Ranjeet Singh (d) Aurangjeb
46. Le Notre developed which type of gardens
 (a) Italian (b) English
 (c) French (d) Japanese
47. Who was first Mughal emperor to develop Mughal gardens in India?
 (a) Akbar (b) Shah Jahan
 (c) Babur (d) Jahangir
48. Which of the following is not a part of Japanese garden?
 (a) Hill garden (b) Sand garden
 (c) Tea garden (d) Bog garden
49. In Japanese language Flat garden is known as
 (a) Roji-niwa (b) Hira-niwa
 (c) Raithai-seki (d) Uchi-roji
50. Sand garden is known as
 (a) Ryoanji (b) Roji-niwa
 (c) Rathai-seki (d) Soto-roji
51. In Japanese garden water the main feature is not used in which form
 (a) Water fall (b) Fountain
 (c) Stream (d) Drip irrigation
52. Lal bagh garden is located at
 (a) Delhi (b) Calcutta
 (c) Bangalore (d) Pune
53. Lal bagh garden was laid down by.....
 (a) Tipu Sultan (b) Hyder Ali
 (c) Lord Curzon (d) None of above
54. Brindavan garden was laid down near.....river.
 (a) Krishna (b) Brahamputra
 (c) Cauvery (d) Ravi.

55. Govt. Botanic Garden, Ootacamund started functioning in
- (a) 1905 (b) 1848
(c) 1921 (d) 1760
56. Which of following is not a feature of Botanic garden at Ootacamund?
- (a) Bog garden (b) Bandstand
(c) Rockery (d) Glasshouse
57. Sim's Park is located at
- (a) Ootacamund (b) Madurai
(c) Chennai (d) Coonoor
58. Botanic garden Coimbatore is the office of
- (a) TNAU (b) DC
(c) Director, Horticulture (d) None of above
59. Department of Agriculture, Madras established the garden at
- (a) Ootacamund (b) Coimbatore
(c) Madurai (d) Coonoor
60. Byrant Part is situated at
- (a) Rameshwaram (b) Trichy
(c) Kodaikanal (d) Coimbatore
61. Indian Botanic garden is located opposite to river
- (a) Ganga (b) Brahmaputra
(c) Hoogly (d) None of above
62. The Agri-Horticultural Society gardens, Calcutta established in
- (a) 1825 (b) 1872
(c) 1905 (d) 1856
63. Indian Botanic garden, Sibpore, Kolkata was established in
- (a) 1787 (b) 1872
(c) 1805 (d) 1905
64. Oldest banian tree is located in which garden.
- (a) Indian Botanical garden Sibpore, Kolkata
(b) Lalbagh garden, Bangalore
(c) Agri-Horti Society garden Kolkata
(d) None of above
65. Largest collection of plants maintained at Agri-Horticultural Society garden, Kolkata was maintained by.....
- (a) S. Percy Lancaster (b) Sir J. Hooker
(c) Sir George King (d) Dr. K. Biswas
66. Llyod Botanic garden, Darjeeling was laid down by.....
- (a) Sir George King (b) William Llyod
(c) Dr. N. Wallich (d) Dr. C C Calder
67. Llyod Botanic garden was established in
- (a) 1872 (b) 1878
(c) 1805 (d) 1787

68. Dawn Redwood, the living fossil tree is preserved in which garden.
(a) Indian Botanic garden Sibpore
(c) Llyod Botanic garden, Darjeeling
(b) Agri-Horti. Society garden, Calcutta
(d) None of above
69. National Botanical Research Institute is popularly known as
(a) Sikander Bagh
(c) Roshnara Bagh
(b) Wajid Ali Shah
(d) None of above
70. Who worked in Horticultural Research Institute garden at Saharanpur established before 1750.
(a) Falconer
(c) Duthie
(b) Jameson
(d) All of above
71. Rashtrapati Bhavan garden, Delhi was completed in
(a) 1905
(c) 1872
(b) 1929
(d) 1948
72. Stone lanterns are important feature in Gardens.
(a) Japanese
(c) Mughal
(b) English
(d) Persian
73. Which of following are not formal gardens?
(a) Mughal
(c) English
(b) Italian
(d) French
74. Lord Budha saw lotus in which garden
(a) Udyan
(c) Parmodyan
(b) Nandanbana
(d) None of these
75. Which type of garden has been constructed at the residence of Poet Ravindernath Tagore.
(a) English
(c) Japanese
(b) Mughal
(d) French
76. Floral clock is important feature at which garden
(a) Lal Bagh
(c) Pinjore Bagh
(b) Nishat Garden
(d) None of above
77. Poet Kalidasa mentioned of which of the following plant in the play Shkuntala?
(a) *Mangifera indica* (Mango)
(c) *Rosa indica* (Rose)
(b) *Hiptage benghalensis* (Madhavi)
(d) All of these
78. Who gave the concept of Cottage gardens?
(a) G. Jekyell
(c) C Calkar
(b) Robert Brown
(d) C Llyoid
79. Moorish gardens are developed in which country?
(a) Egypt
(c) Spain
(b) England
(d) Austria
80. Who developed Sim's Park Conoor, Tamil Nadu in 1874?
(a) Hooker
(c) A Conoor
(b) William Sim
(d) J.D. Sim

B. Fill in the Blanks

1. Rashtrapati bhavan garden was designed by
2. Brindavan garden is situated at
3. Floral clock is an important feature created in garden at Bangalore.
4. Nandanvana is a type ofgarden.
5. The famousgarden at Chandigarh was built by Padama Shri Nek Chand Saini of village Bhund, Gurdaspur, Punjab.
6. William gave the concept of wild gardening.
7. park is a Japanese type garden built at New Delhi.
8. Chinese gardens arestyle gardens.
9. Baradari is a common feature ingarden.
10. NBRI Lucknow garden was developed by.....
11. The oldest banyan tree is still present at Indian botanic garden at.....
12. First Islamic garden in India was developed by.....
13. Garden ofis regarded as genesis of gardening.
14. Llyod Botanic garden is situated at.....
15.was a famous French landscape designer.

KEY

Multiple Choice Questions

- | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (c) | 2. (c) | 3. (c) | 4. (c) | 5. (a) | 6. (b) | 7. (b) | 8. (b) |
| 9. (b) | 10. (c) | 11. (a) | 12. (b) | 13. (a) | 14. (b) | 15. (b) | 16. (a) |
| 17. (a) | 18. (d) | 19. (c) | 20. (a) | 21. (b) | 22. (b) | 23. (c) | 24. (c) |
| 25. (c) | 26. (c) | 27. (a) | 28. (a) | 29. (d) | 30. (b) | 31. (b) | 32. (c) |
| 33. (b) | 34. (b) | 35. (a) | 36. (a) | 37. (d) | 38. (a) | 39. (c) | 40. (a) |
| 41. (a) | 42. (b) | 43. (c) | 44. (c) | 45. (b) | 46. (c) | 47. (c) | 48. (d) |
| 49. (b) | 50. (a) | 51. (d) | 52. (c) | 53. (b) | 54. (c) | 55. (b) | 56. (d) |
| 57. (d) | 58. (a) | 59. (b) | 60. (c) | 61. (c) | 62. (b) | 63. (a) | 64. (a) |
| 65. (a) | 66. (a) | 67. (b) | 68. (c) | 69. (a) | 70. (d) | 71. (b) | 72. (a) |
| 73. (c) | 74. (b) | 75. (c) | 76. (a) | 77. (b) | 78. (a) | 79. (c) | 80. (d) |

Fills In the Blanks

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|----------------------|----------------------|---------------|
| 1. Sir Edwin Lutyens | 2. Mysore | 3. Lalbagh |
| 4. Budhist | 5. Rock | 6. Robinson |
| 7. Roshnara | 8. Informal | 9. Mughal |
| 10. Wazid Ali Shah | 11. Sibpore, Kolkata | 12. Ferozshah |
| 13. Eden | 14. Darjeeling | 15. Le Notre |

Multiple Choice Questions

- The design and alteration of a portion of land by use of planting material and land reconstructions is known as.....
 (a) Landscaping
(c) Landscape
(b) Floriculture
(d) Garden
- is branch of Horticulture which includes both the aspects of Floriculture and Landscaping.
(a) Olericulture
 (c) Ornamental Horticulture
(b) Horticulture
(d) Landscape Architecture
- The technology which is ultra modern, less environment dependent and capital intensive having improved productivity with quality produce is known as
 (a) Hi-tech Floriculture
(c) Landscaping
(b) Gardening
(d) None of these
- is a design with definite use of plants to serve certain aesthetic or utilitarian purpose.
(a) Gardening
(c) Topiary
(b) Landscape
 (d) Landscape Garden
- is the general outlaying or appearance of an area in relation to its surroundings.
(a) Floriculture
(c) Design
 (b) Landscape
(d) Hedge
- is a branch of Horticulture which deals with commercial growing, marketing and arranging flowers and ornamental plants.
(a) Forestry
 (c) Floriculture
(b) Pomology
(d) Landscaping
- is the determination of a character of an object to serve certain purpose known in advance.
(a) Landscape Architecture
(c) Ornamental Horticulture
 (b) Landscape Design
(d) Texture
- is the art of arranging land and landscape for human use, convenience and enjoyment.
 (a) Landscape Architecture
(c) Landscape Gardening
(b) Landscape Design
(d) Floriculture
- is the planning and planting of outdoor space to secure the most desirable relationship between the landform architect and plants to best meet the human needs for beauty and function.
(a) Landscape
 (c) Landscape Gardening
(b) Landscape Design
(d) Ornamental Plants
- is the conservation of water through creative landscaping.
(a) Landscape Architecture
(c) Ornamental Horticulture
(b) Water harvesting
 (d) Xeriscaping

11. Which of the following is not a component of Floriculture Industry?
 (a) Florist trade (b) Flower perfumery
 (c) Painting (d) Seeds and bulbs
12. Which of the following is presented at the time of departure?
 (a) Liliun (b) Sweet pea
 (c) Stock (d) Pansy
13. Which of the following is the national flower of Iran?
 (a) Liliun (b) Carnation
 (c) Rose (d) Tulip
14. The national flower of the Netherlands is
 (a) Narcissus (b) Carnation
 (c) Rose (d) Tulip
15. The national flower of China is
 (a) Narcissus (b) Liliun
 (c) Chrysanthemum (d) Tulip
16. The national flower of Germany is
 (a) Narcissus (b) Carnation
 (c) Corn flower (d) Liliun
17. The national flower of USA is
 (a) Chrysanthemum (b) Carnation
 (c) Rose (d) Tulip
18. The national flower of Wales is
 (a) Daffodil (b) Carnation
 (c) Gerbera (d) Tulip
19. The national flower of Japan is
 (a) Narcissus (b) Carnation
 (c) Chrysanthemum (d) Rose
20. Which of the following flower is a symbol of self-esteem?
 (a) Pansy (b) Sweet pea
 (c) Narcissus (d) Tulip

KEY

EXERCISE

A. Multiple Choice Questions

1. Indian floriculture industry is growing around per cent per annum.
(a) 8-9 (b) 4-6
(c) 3-4 (d) 1-2
2. Total area under flower crops in our country during 2012-13 was thousand hectares.
(a) 233 (b) 135
(c) 124 (d) 65
3. Flower products export from India during 2012-13 was about Rs. crores.
(a) 420 (b) 220
(c) 300 (d) 600
4. Flower production in our country was about MT during 2012-13.
(a) 1100 (b) 1700
(c) 2650 (d) 4450
5. In our country how many private units are engaged in export of flowers?
(a) 500 (b) 200
(c) 100 (d) 50
6. Maximum area in our country is in which of the following flower crop?
(a) Jasmine (b) Tuberose
(c) Marigold (d) Crossandra
7. Which one is growing in largest area as long stem cut flower in our country?
(a) Chrysanthemum (b) Rose
(c) Carnation (d) Orchid
8. NRC Orchids is situated in which state?
(a) West Bengal (b) Assam
(c) Meghalaya (d) Sikkim *RoseBazaar.Com*
9. In which city of India, the first website was launched for auctioning of flowers?
(a) Delhi (b) Bangalore
(c) Pune (d) Hyderabad
10. Which country was the largest importer of Indian flowers during 2006-07 to 2012-13?
(a) UK (b) USA
(c) Japan (d) Holland
11. How much value was the export of cut flowers from India during 2012-13?
(a) ₹ 10 crores (b) ₹ 20 crores
(c) ₹ 26 crores (d) ₹ 59 crores
12. How much is the approximate share of dried floricultural products in total floriculture export from India?
(a) 60% (b) 40%
(c) 30% (d) 20%

13. How much value flower market annually has been estimated in Delhi?
 (a) ₹ 50 crores (b) ₹ 100 crores
~~(c) ₹ 500 crores~~ (d) ₹ 60 lakhs
14. The Project Directorate on Floriculture in ICAR started during
~~(a) 2010~~ (b) 2005
 (c) 2000 (d) 1990
15. National Floriculture Model Farm in H.P. is situated at.....
 (a) Shimla (b) Chamba
~~(c) Chail~~ (d) Nahan
16. Division of Floriculture and Landscape Gardening at IHR Bangalore was established in.....
 (a) 1960 ~~(b) 1969~~
 (c) 1979 (d) 1983
17. Division of Floriculture and Landscaping at IARI New Delhi was established in
 (a) 1971 (b) 1976
 (c) 1980 ~~(d) 1983~~
18. All India Coordinated Floriculture Improvement Project of ICAR was started in
~~(a) 1971~~ (b) 1979
 (c) 1980 (d) 1983
19. During 8th five year plan how many model floriculture centres have been approved
 (a) 20 ~~(b) 11~~
 (c) 6 (d) 2
20. For area expansion in bulbous plants for 0.2 ha how much grant was given?
 (a) ₹ 15000 (b) ₹ 25000
~~(c) ₹ 20000~~ (d) ₹ 4000
21. In a flower show competition exhibitors are not classified in which of following way
 (a) Amateur grower (b) Professional growers
~~(c) Scientists~~ (d) Open to all type of growers
22. Which of the following company was established in 1984 for mass propagation of ornamentals?
~~(a) A.V. Thomas~~ (b) Essar Agrotech
 (c) Indo-American Hybrid Seed Co. (d) Florabase Limited
23. Which of the following person has made significant contribution in Floriculture even being a non-professional?
~~(a) M.S. Randhawa~~ (b) B.P. Pal
 (c) G.S. Randhawa (d) K.L. Chadha
24. Bhabha Atomic Research Centre, Bombay has research mandate on Floriculture in which of the following area?
 (a) Rose oil extraction ~~(b) Micro-propagation of ornamentals~~
 (c) Landscaping for cities (d) Tree breeding

25. All India Coordinated Floriculture Improvements Project at present has working centres betweenin India.
 (a) 6-8 (b) 10-12
 (c) 15-20 (d) 20-25
26. At Regional Plant Resource Centre Bhubaneshwar which of following category has maximum species and cultivars?
 (a) Orchids (b) Palms
 (c) Conifers (d) Cacti
27. At which station research on *Nymphaea* has been conducted in India?
 (a) IHR Bangalore (b) BSI Calcutta
 (c) IARI New Delhi (d) NBRI Lucknow
28. Which of the following is a popular flower crop of North-eastern states?
 (a) Rose (b) Chrysanthemum
 (c) Orchids (d) Gladiolus
29. How many cultivars of Bougainvillea have been developed in India?
 (a) 300 (b) 200
 (c) 150 (d) 75
 Rose ~~75~~ = 600
30. Which of the following is directly associated with the export of flowers in India?
 (a) ICAR (b) NHB
 (c) NAPHEd (d) APEDA
31. In Himachal Pradesh Model Floriculture Centre during 10th five year plan has been started at
 (a) Kandaghat (b) Shimla
 (c) Rajgarh (d) Palampur
32. Research on Jasmines in India is concentrated at
 (a) IARI (b) TNAU
 (c) NBRI (d) IIVR
33. For establishing new model floriculture centre how much financial assistance was given in 9th five year plan to various states (₹ Lakh)?
 (a) 70 (b) 40
 (c) 30 (d) 20
34. For developing flower nursery in public sector how much grant was sanctioned in 9th plan (₹ Lakh)?
 (a) 10 (b) 5
 (c) 2 (d) 0.5
35. The Project Directorate on Floriculture of ICAR is now situated in
 (a) Bangalore (b) Pune
 (c) New Delhi (d) Solan

B. Fill in the Blanks

- Total area under flower crops in India is about ha.
- Division of Floriculture and Landscaping at IARI New Delhi was created in 1983

3. In India traditional flower crops are grown in about $\frac{2}{3}$ rd of total area under floriculture.
4. Indian export of floricultural products during 2012-13 was around ₹ crores.
5. Rose is the main cut flower being exported from India.
6. Seeds of ornamental annuals for export are commercially being grown in open in Punjab state.
7. Jasmines are commercially grown in Southern part of the country.
8. The first online auction (website) of flowers in India started at Bangalore in 2000.
9. First hybrid of ornamental annual (Petunia) in India was developed by
10. International Bougainvillea registration centre is situated at IARI,
11. Head Quarter of Indian Society of Ornamental horticulture is situated at IARI
12. Dr. B.P. Pal a renowned Rosarian was the first Director General of ICAR.
13. NRC Orchids was established at during VIII five-year plan.
14. National depository for germplasm of chrysanthemum is at NBRI
15. National depository for germplasm of carnation is situated at UHF, Solan.

KEY

Multiple Choice Questions

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|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (a) | 2. (a) | 3. (a) | 4. (b) | 5. (b) | 6. (c) | 7. (b) | 8. (d) |
| 9. (b) | 10. (b) | 11. (c) | 12. (a) | 13. (c) | 14. (a) | 15. (c) | 16. (b) |
| 17. (d) | 18. (a) | 19. (b) | 20. (c) | 21. (c) | 22. (a) | 23. (a) | 24. (b) |
| 25. (c) | 26. (d) | 27. (b) | 28. (c) | 29. (c) | 30. (d) | 31. (d) | 32. (b) |
| 33. (a) | 34. (b) | 35. (b) | | | | | |

Fills in the Blanks

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|---------------------|--------------------|--------------------------------|
| 1. 2.33 lakh | 2. 1983 | 3. $\frac{2}{3}$ rd |
| 4. 420 | 5. Rose | 6. Punjab |
| 7. Southern | 8. Bangalore | 9. Manmohan Attavar |
| 10. IARI New Delhi | 11. IARI New Delhi | 12. Dr. B.P. Pal |
| 13. Gangtok, Sikkim | 14. NBRI Lucknow | 15. UHF Solan |

A. Multiple Choice Questions

1. The largest producer of cut flowers in the world is
(a) USA
(b) Colombia
(c) Israel
(d) The Netherlands
2. Indian share in the global flower market is about
(a) 5%
(b) 2%
(c) 10%
(d) 0.5%
3. Total floricultural products trade in the world during 2012 was around billion US \$.
(a) 7
(b) 20
(c) 30
(d) 50
4. Biggest international flower market is located at
(a) Washington
(b) Singapore
(c) London
(d) Aalsmeer
5. Colombia is second largest exporter of cut flowers and its share in international flower trade is about%
(a) 5
(b) 15
(c) 40
(d) 50
6. Per capita consumption of cut flowers is highest in which country.
(a) India
(b) USA
(c) Switzerland
(d) Germany
7. Total area under flower crops in the world is about million hectares.
(a) 0.25
(b) 2.5
(c) 10
(d) 50

8. World trade in live/ foliage plants is about billion US \$.
 (a) 4 ~~(b) 8~~
 (c) 12 (d) 20
9. Maximum share of live/ foliage plants export in the world is from which of the following country?
 (a) Germany (b) China
~~(c) The Netherlands~~ (d) Denmark
10. Biggest market for flower products of about 3 billion US \$ is in
 (a) USA (b) China
~~(c) Germany~~ (d) Japan
11. Which of following is No. one cut flower in international cut flower market?
~~(a) Rose~~ (b) Tulip
 (c) Chrysanthemum (d) Orchid
12. Total area under protected cultivation in the world is aroundthousand hectares.
 (a) 20 (b) 40
~~(c) 60~~ (d) 100
13. Global Floriculture industry is growing at a modest rate of per cent per annum.
~~(a) 10~~ (b) 20
 (c) 30 (d) 40
14. Which of following is the leading flowering pot plant at the global level?
 (a) Rose ~~(b) Phalaenopsis~~
 (c) Cymbidium (d) Geranium
15. Maximum growth of floriculture has been noticed in which country in the last decade.
~~(a) Ecuador~~ (b) Zimbabwe
 (c) Spain (d) Belgium
16. In cut foliage trade, which of the following is leading exporter?
 (a) USA (b) Italy
 (c) Costa Rica ~~(d) the Netherlands~~
17. In Asia which of the following is largest exporter of flowers?
 (a) India ~~(b) China~~
 (c) Korea (d) Japan
18. Indian florist trade has reached around million US \$.
 (a) 30 (b) 40
~~(c) 80~~ (d) 150
19. The largest importer of floricultural products in Asia is during 2012 was
 (a) India (b) Israel
~~(c) Japan~~ (d) China
20. Maximum consumption of cut roses is during which of the following event?
~~(a) Valentines day~~ (b) Mother's day
 (c) Easter (d) X-mas day

B. Fill in the Blanks

1. Aalsmeer is the largest international market for flower products in the world.
2. Global floriculture trade is around billion US \$.
3. Germany is the largest consumer of flower products in the world.
4. Netherlands is the largest exporter of cut flowers and pot plants.
5. Netherlands is the largest exporter of cut greens
6. Florida is regarded as cut greens capital of the world.
7. Norway Per capita consumption of flower products (cut flowers and pot plants) is highest in ...
8. Colombia is known for quality production of Standard carnations.
9. Israel is known for quality production of Spray carnations.
10. Rose is the top most cut flower both number and value wise in the international flower market.
11. Phalaenopsis was the first pot plant in the global flower market.
12. India is the largest producer of loose flowers in the world.
13. Maximum Rose cut flowers are presented on day
14. Maximum cut flowers are consumed on the occasion of Valentine and Easter day.
15. In Asia, China has maximum acreage under flower crops.

KEY

Multiple Choice Questions

- | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (d) | 2. (d) | 3. (b) | 4. (d) | 5. (b) | 6. (c) | 7. (b) | 8. (b) |
| 9. (c) | 10. (c) | 11. (a) | 12. (c) | 13. (a) | 14. (b) | 15. (a) | 16. (d) |
| 17. (b) | 18. (c) | 19. (c) | 20. (a) | | | | |

Fills in the Blanks

- | | | |
|--------------------|----------------------------|--------------------|
| 1. Aalsmeer | 2. 20 | 3. Germany |
| 4. The Netherlands | 5. The Netherlands | 6. Apopka, Florida |
| 7. Norway | 8. Standard | 9. Spray |
| 10. Rose | 11. <u>Phalaenopsis</u> | 12. India |
| 13. Valentine's | 14. Valentine's and Easter | 15. China |

A. Multiple Choice Questions

1. Swami Vinayananda of RK Math has done pioneer work in
(a) Dahlia (b) Gladiolus
(c) Rose (d) Marigold
2. Dahlia was first introduced by Agri-Horticultural Society of India at Calcutta in
(a) 1935 (b) 1857
(c) 1982 (d) 1905
3. Dr MA Kher eminent scientist from NBRI Lucknow was associated with
(a) Chrysanthemum (b) Dry flowers
(c) Rose (d) China aster
4. Bharat Sundari is a famous cultivar of developed at IIHR, Bangalore.
(a) Rose (b) Hibiscus
(c) Gladiolus (d) Bougainvillea
5. Thornless rose rootstock was developed at
(a) IARI (b) NBRI
(c) IIHR (d) BARC
6. Which of the following Floribunda rose cultivar has been patented in USA?
(a) Chitchor (b) Fugitive
(c) Mohini (d) Sindhoor
7. First cultivar of rose released by Dr BP Pal was in 1962.
(a) Rose Sherbet (b) Dulhan
(c) Aruna (d) Mehak
8. International Bougainvillea registration centre is located at
(a) IIHR (b) NBRI
(c) IARI (d) TNAU
9. Which of following is growing as a long stem cut rose in India?
(a) Raktagandha (b) Anurag
(c) Dr. Homi Bhabha (d) Mother Teresa

10. Floribunda cultivar of rose is also used as cut flower.
 (a) Shola (b) Rose Sherbet
 (c) Sindhoor (d) Mohini
11. Banjaran cultivar of rose belongs to category.
 (a) Hybrid Tea (b) Polyantha
 (c) Floribunda (d) Tea
12. Which of following is very good rootstock of bougainvillea?
 (a) Dr. RR Pal (b) Sonnet
 (c) Thimma (d) Stanza
13. Pusa Basanti is an open pollinated cultivar of
 (a) Zinnia (b) Chrysanthemum
 (c) Rose (d) Marigold
14. Mayur a cultivar of gladiolus was developed at
 (a) NBRI (b) IARI
 (c) IHR (d) PAU
15. Queen Elizabeth is a common cultivar of
 (a) Rose (b) Marigold
 (c) Carnation (d) Dahlia
16. Birbal Sahani a cultivar of is developed at NBRI Lucknow.
 (a) Rose (b) Marigold
 (c) Bougainvillea (d) Chrysanthemum
17. For pot culture which one of following is important cultivar of bougainvillea?
 (a) Begam Sikander (b) Surehka
 (c) Archana (d) Shweta
18. Amar Shola is a cultivar of
 (a) Marigold (b) China Aster
 (c) Verbena (d) Amaranthus
19. French marigold is
 (a) Diploid (b) Tetraploid
 (c) Triploid (d) Aneuploid
20. Gladiolus has diploid chromosome number
 (a) 60 (b) 30
 (c) 20 (d) 40
21. Samrat a tetraploid cultivar of developed at NBRI Lucknow.
 (a) Amaryllis (b) Tuberose
 (c) Rose (d) Verbena
22. Rajat Rekha is a mutant cultivar of
 (a) Dahlia (b) Tuberose
 (c) Rose (d) Portulaca
23. First cultivar in rose developed by Shri BK Roychowdhary was
 (a) Rose Sherbet (b) Pusa Sonia
 (c) Arjun (d) Dr SD Mukherjee

24. The Rose in India book is written by
- (a) B.P. Pal (b) Vishnu Swarup
(c) M.S. Randhawa (d) S.L. Jindal
25. Most of the cultivars of chrysanthemum are
- (a) Short day (b) Long day
(c) Day neutral (d) None of above
26. Lt. Governor of Himachal Pradesh Shri Bajrang Bahadur Singh Bhadari has developed 160 cultivars of
- (a) Rose (b) Gladiolus
(c) Dahlia (d) Chrysanthemum
27. Dioecy is very common in
- (a) Asparagus (b) Tulip
(c) Petunia (d) Aster
28. Male sterility is common in MAP
- (a) Petunia (b) Marigold
(c) Antirrhinum (d) All of these
29. Self-incompatibility is not common in
- (a) Ageratum (b) Petunia
(c) English daisy (d) Rose
30. Thimma is an important cultivar of
- (a) Rose (b) Bougainvillea
(c) Tuberose (d) Tulip
31. Which of following cultivar of roses is not developed through mutation at IARI?
- (a) Madhosh (b) Abhisarika
(c) Pusa Christina (d) Arjun
32. Which of following cultivar of gladiolus is resistant to Fusarium wilt?
- (a) Sagar (b) Sapna
(c) Dhiraj (d) Apsara
33. Pusa Tara is a cultivar of
- (a) Marigold (b) Cosmos
(c) Coreopsis (d) Aster
34. Which of following is not a cultivar of Hollyhock developed at IARI?
- (a) Pusa Krishna (b) Pusa Sonia
(c) Pusa Lalima (d) Pusa Gulabi
35. Which of following is a hybrid of African marigold?
- (a) Pusa Basanti (b) Pusa Narangi
(c) Pusa Shankar-I (d) Pusa Sweta
36. Which is not a cultivar of China aster?
- (a) PG Purple (b) PG White
(c) PG Violet (d) Poornima

37. Which of following is not a cultivar of Tuberose?
 (a) Shringar (b) Suvashini
 (c) Rajat Rekha (d) Swarna
38. Suvashini is a cultivar of tuberose released by...
 (a) IIHR (b) NBRI
 (c) IARI (d) IHBT
39. Which of following is not a fragrant species of *Jasminum*?
 (a) *grandiflorum* (b) *sambac*
 (c) *primulinum* (d) *auriculatum*
40. CO 1 Pitchi is a cultivar of which of following *Jasminum* species.
 (a) *sambac* (b) *grandiflorum*
 (c) *auriculatum* (d) *humile*
41. Which is not a cultivar of *Jasminum auriculatum*?
 (a) Motia (b) Large round
 (c) Long point (d) Pari Mullai
42. In bougainvillea how many cultivars have been developed in India?
 (a) 50 (b) 175
 (c) 150 (d) 200
43. Which cultivar of bougainvillea is not developed through inter-specific hybridization?
 (a) Mahatama Gandhi (b) Begum Sikander
 (c) Chitra (d) Wazi Ali Shah
44. Which of following has resulted through natural hybridization in bougainvillea?
 (a) Dr. RR Pal (b) Rose Queen
 (c) Summer Time (d) All of these
45. In bougainvillea how many cultivars have been developed through bud sprouts with leaf variegation?
 (a) 10 (b) 50
 (c) 30 (d) 120
46. Which of following cultivar of dahlia was developed at IARI Regional Station Katrain?
 (a) Manali (b) Jyotsana
 (c) Manjushri (d) Kenya Blue
47. Which is/ are cultivar/s of *Portulaca* developed at NBRI Lucknow?
 (a) Jhumka (b) Lalita
 (c) Ratnam (d) All of above
48. Fossils of roses in USA have been reported million years old.
 (a) 10 (b) 1
 (c) 30 (d) 100
49. Diploid chromosome no. of roses is
 (a) 10 (b) 28
 (c) 14 (d) 20

50. Which of the *Rosa* species is resistant to cold?
 (a) *centiflora* (b) *rugosa*
 (c) *foetida* (d) *chinensis*
51. Pelargenidin anthocyanidin is present in colour.
 (a) Blue (b) Orange-Red
 (c) Yellow (d) White
52. Cyandin anthocyanidin is present in colour.
 (a) Black (b) Pink
 (c) Bluish-Red (d) Yellowish-white
53. Inheritance of pigments is controlled by gene action.
 (a) Additive (b) Dominance
 (c) Epistasis (d) None of above
54. For expressing fragrance in progenies the parent should possess fragrance.
 (a) female (b) male
 (c) both (d) none of these
55. Fragrance is controlled by gene.
 (a) Mono (b) Oligo
 (c) Poly (d) None of these
56. Eminent Rosarian Dr. BP Pal has developed how many rose varieties.
 (a) 50 (b) 200
 (c) 105 (d) 130
57. Bougainvillea belongs to family
 (a) Nyctaginaceae (b) Rosaceae
 (c) Combretaceae (d) Apocynaceae
58. Which of following variety has variegated foliage?
 (a) Mrs. HC Buck (b) Thimma
 (c) Dr. RR Pal (d) Shubra
59. Which of following is not a multibracted Bongainvillea cultivar?
 (a) Mahara (b) Cherry Blossom
 (c) Partha (d) Los Banos Beauty
60. Which of following is bicoloured cultivar?
 (a) Partha (b) Splendens
 (c) Snow Queen (d) Sonnet
61. Singleness in chrysanthemum is over doubleness
 (a) Partially dominant (b) Recessive
 (c) Dominant (d) Any of above
62. Pin and thrum type of flowers are found in
 (a) Marigold (b) Primula
 (c) Cyclamen (d) Petunia
63. Gametophytic self incompatibility is found in
 (a) Petunia (b) Trifolium
 (c) Nicotiana (d) All of these

64. Which of following is fully compatible?
 (a) $S_1 \times S_2 \times S_2 \times S_3$
 (c) $S_1 \times S_2 \times S_1 \times S_2$
 (b) $S_1 \times S_2 \times S_3 \times S_4$
 (d) None of these
65. Which of following is compatible mating in pin and thrum flowers?
 (a) $ss \times ss$
 (c) $Ss \times ss$
 (b) $Ss \times Ss$
 (d) None of these
66. In Sporophytic type of self-incompatibility how many alleles are associated with S gene?
 (a) 10
 (c) 15
 (b) 30
 (d) 50
67. In which type, incompatibility reaction is governed by the plant on which pollen is produced and not by the genotype of the pollen?
 (a) Sporophytic
 (c) Heteromorphic
 (b) Gametophytic
 (d) None of these
68. Genetic male sterility is very common in
 (a) China Aster
 (c) Gaillardia
 (b) Marigold
 (d) Dahlia
69. Which of following is most common type of sterility in ornamental plants?
 (a) Genetic
 (c) Cytoplasmic-genetic
 (b) Cytoplasmic
 (d) All of above
70. Self-incompatibility is overcome by
 (a) Bud pollination
 (c) Irradiation
 (b) Surgical techniques
 (d) All of above
71. Single gene male sterility is transferred in years.
 (a) 3-4
 (c) 7-8
 (b) 5-6
 (d) 4-5
72. Which of following breeding method is most successful in ornamental plants?
 (a) Pure line selection
 (c) Mutation
 (b) Mass selection
 (d) Hybridization
73. Which of following is used for production of virus free plants?
 (a) Nodes
 (c) Anther
 (b) Meristem culture
 (d) Ovule
74. Which of following aneuploids are mostly used in ornamentals?
 (a) Monosomic
 (c) Trisomic
 (b) Nullisomic
 (d) None of above
75. In which of following maximum somatic hybrids have been released?
 (a) Stock
 (c) Geranium
 (b) Petunia
 (d) None of these.
76. Genetic engineering in petunia is targeted to evolvecultivars.
 (a) Red
 (c) Blue
 (b) Yellow
 (d) Orange

77. Which of following sweet pea variety has been developed by single plant selection?
 (a) Spencer
 (c) Suchitra (b) Aruna
 (d) Thimma
78. Which of the following is not true species of *Bougainvillea*?
 (a) *spectabilis*
 (c) *glabra* (b) *buttiana*
 (d) *peruviana*
79. Which of following is the cultivar of *Rosa damascena* developed by IHBT Palampur?
 (a) Rose Sherbet
 (c) Himroz (b) Damascena selection
 (d) Lalima
80. Rose breeders who hold patents for cultivars for growing in greenhouse in India for export purpose.
 (a) De Renter (b) Tan Tau
 (c) Kordes (d) All of above
81. BS Bhattacharji a renowned rose breeder has developedcultivars.
 (a) 100 (b) 125
 (c) 200 (d) 50
82. Mutation with invisible phenotypic changes found in polygenic traits is known as
 (a) Mutation (b) Transversion
 (c) Micro mutation (d) Macro mutation
83. Any change from wild type is known as
 (a) Forward mutation (b) Point mutation
 (c) Somatic mutation (d) Macro mutation
84. Change from mutant allele to wild type is known as
 (a) Reverse mutation (b) Somatic mutation
 (c) Nuclear mutation (d) None of above
85. Which of following carries information from nuclear RNA to cytoplasm?
 (a) rRNA (b) tRNA
 (c) DNA (d) mRNA
86. Which of following cultivar of Chrysanthemum flower during July-August?
 (a) Meghdoot (b) Punjab Gold
 (c) Maghi (d) Birbal Sahini
87. Which of following cultivar of Chrysanthemum flower during February-March?
 (a) Sharad Mala (b) Maghi
 (c) Jwala (d) None of above
88. Which cultivar of Chrysanthemum flower during April-June?
 (a) Sonar Bangala (b) Himanshu
 (c) Snowball (d) Aprajita
89. Maximum pollen receptivity in roses is after days of anthesis.
 (a) 7 (b) 2
 (c) 1 (d) 3

90. For using cut flower rose cultivar should have
- (a) More petals
(b) Opening slowly
(c) Long stem
(d) All of above
91. Pollen sterility in roses is checked by
- (a) Potassium Iodide
(b) Acetocarmine
(c) Ethyl alcohol
(d) All of above
92. Which of following chemicals are used in Mutation studies?
- (a) EMS
(b) MES
(c) NMU
(d) All of above
93. Gene mutations are common in
- (a) Sweet pea
(b) China aster
(c) Phlox
(d) All of above
94. Dr. Abraham was associated with
- (a) Rose
(b) Orchids
(c) Jasmine
(d) All of these
95. Who of the following was not associated with Rose breeding?
- (a) BK Roychowdhury
(b) Swami Vinayananda
(c) BS Bhattacharaji
(d) Kasturi Rangan
96. Who of the following is associated with Jasmines?
- (a) S Muthuswami
(b) BP Pal
(c) RS Malik
(d) TK Bose
97. Who of following is associated with Marigold breeding in India?
- (a) B Singh
(b) RL Misra
(c) ML Chaudhary
(d) SPS Raghava
98. Who of the following is not associated with breeding of gladiolus?
- (a) RL Misra
(b) D Mukherjee
(c) SK Bhattacharjee
(d) SR Dohare
99. Who of the following is associated with breeding of carnation in India?
- (a) US Kaicker
(b) HP Singh
(c) JS Arora
(d) JC Bhutani
100. Who of the following is associated with breeding of orchids in India?
- (a) SS Negi
(b) SPS Raghava
(c) Foja Singh
(d) KL Chadha

(A) Multiple Choice Questions

1. Sleepiness is associated with flowers of
(a) Gladiolus
(c) Chrysanthemum
 (b) Carnation
(d) Tulip
2. Which of the following *Dianthus* species is not cultivated commercially?
 (a) *caryophyllus*
(c) *nobilis*
(b) *chinensis*
(d) *barbatus*
3. Which of the type of carnation is grown on large scale in green house? JPK-19
(a) Marguerite
(c) Marmaison
 (b) Perpetual
(d) Border & Picotee
4. Which of following cultivar is not tolerant to Fusarium wilt?
 (a) Tangerine Sim
(c) Naveda
(b) Revada
(d) Vanya
5. Arthur Sim carnation is highly resistant to
(a) Fusarium wilt
(c) Stem Rot
 (b) Rust
(d) Blight

6. Which of following *Rosa* species is not commonly used as a rootstock in roses?
 (a) *indica* var. *odorata* (b) *bourboniana*
 (c) *multiflora* (d) *chinensis*
7. In hilly areas roses are planted during
 (a) October-November (b) February-March
 (c) July-August (d) All of above
8. The best time of pruning roses in North Indian plains is
 (a) October-November (b) November-December
 (c) June-July (d) September-October
9. Pruning in roses is done twice during November and June at
 (a) Delhi (b) Bangalore
 (c) Calcutta (d) Shimla
10. Roses are harvested when buds show colour.
 (a) Full (b) Half
 (c) No (d) At any stage
11. Which of following is not a Sympodial orchid?
 (a) *Cymbidium* (b) *Vanda*
 (c) *Dendrobium* (d) *Oncidium*
12. Which of following is not a warm orchid?
 (a) *Phalaenopsis* (b) *Vanda*
 (c) *Dendrobium* (d) *Cymbidium*
13. For symbiotic seed germination of orchids which *Rhizoctonia* species is identified?
 (a) *repens* (b) *mucoroides*
 (c) *languinosa* (d) All of these
14. Who first started tissue culture in orchids?
 (a) Morel (b) Kundson
 (c) Chang (d) None of above
15. Which of following is commonly known as sword lily?
 (a) Irish (b) *Gladiolus*
 (c) *Crocus* (d) *Daffodil*
16. First hybrid in *gladiolus* was developed in 1841.
 (a) *G x gandavensis* (b) *G. x psittacinus*
 (c) *G. oppositiflorus* (d) None of above
17. Calyx splitting of carnation is because of
 (a) Genetic factors (b) Nutritional factors
 (c) Environmental factors (d) All of above
18. Sleepiness of carnation is because of
 (a) Ethylene (b) CO_2
 (c) High temperature (d) All of above
19. Curly tip disorder in carnation is because of
 (a) Low light (b) Low temperature
 (c) Nitrogen deficiency (d) All of above

20. Stem rot of carnation is caused by

- (a) *Rhizoctonia*
 (c) *Fusarium*

- (b) *Botrytis*
 (d) *Uromyces*

21. Flower bud rot of carnation is caused by

- (a) *Botrytis*
 (c) *Pleospora*

- (b) *Fusarium*
 (d) All of above

22. Which of the following is most serious pest in carnation?

- (a) Red spider mite
 (c) Thrips

- (b) Aphid
 (d) Moth

23. Lotus belongs to family

- (a) Rosaceae
 (c) Lotaceae

- (b) Nymphaeaceae
 (d) Compositae

24. Which of following is not a common name of lotus in Sanskrit?

- (a) Water lily
 (c) Kamala

- (b) Padma
 (d) Pankaja

25. Who is not associated with lotus?

- (a) Brahma
 (c) Shiva

- (b) Vishnu
 (d) Krishna

26. Rhizomes of which of the following are edible?

- (a) Lotus
 (c) Hydrangeum

- (b) Canna
 (d) Calla lily

27. *Nelumbo lutea* is commonly known as

- (a) American lotus
 (c) Chinese

- (b) Indian lotus
 (d) Kamala

28. In miniature carnations which operation is mostly practiced?

- (a) Pinching
 (c) Staking

- (b) Long day
 (d) None of these

29. Carnation is classified as plant

- (a) Short day
 (c) Day neutral

- (b) Long day
 (d) None of above

30. Perpetual carnations are commercially propagated by

- (a) Terminal stem cutting
 (c) Suckers

- (b) Seed
 (d) All of above

31. Pinching in carnations is normally done atpairs of leaves.

- (a) 4-5
 (c) 8-10

- (b) 6-7
 (d) 10-12

32. Which of following pinching type is practiced to get a single peak?

- (a) Single
 (c) Pinch and a half

- (b) Double
 (d) Single pinch plus pull pinch

33. Calyx splitting is common practice in

- (a) Gladiolus
 (c) Carnations

- (b) Marigold
 (d) Lily

34. Which of following operation is practiced to get large bloom in carnation?
 (a) Pinching (b) Disbudding
 (c) Defoliation (d) Pruning
35. Silver Thiosulphate is not commonly used to enhance flower longevity in
 (a) Rose (b) Tulip
 (c) Lily (d) Carnation
36. Society of American Florists has classified carnation & does not include which of following grade.
 (a) Blue (b) Red
 (c) White (d) Green
37. One kg oil is obtained from how much roses
 (a) 10 ton (b) 3-4 ton
 (c) 10-15 ton (d) 0.1 ton
38. Gulkand is prepared by mixing rose petals and sugar in ratio of
 (a) 1 : 1 (b) 2 : 1
 (c) 1 : 2 (d) 1 : 3
39. Fossils of roses in USA have been reported million year old
 (a) 10 (b) 1
 (c) 30 (d) 100
40. Diploid chromosome no of roses is
 (a) 10 (b) 28
 (c) 14 (d) 20
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 (a) Additive (b) Dominance
 (c) Epistasis (d) None of above
45. For expressing fragrance in progenies the parent should possess fragrance
 (a) male (b) female
 (c) both (d) none of these
46. Fragrance is controlled by gene.
 (a) Mono (b) Oligo
 (c) Poly (d) None of these

47. Chemical defoliation in roses is done by
(a) Urea
(c) Auxin
~~(b) Copper sulphate~~
(d) GA
48. The time for budding in roses in N. I. plains.
(a) September-October
(c) April-May
~~(b) November-December~~
(d) July-August
49. Which fragrant cultivar of rose is grown in greenhouses?
(a) Konfetti
(c) Jacaranda
(b) Cocktail
~~(d) All of above~~
50. Now-a-days thornless rose cultivars are becoming popular among consumers, which of following falls in this category.
~~(a) Grand gala~~
(c) Motrea
(b) Mercedes
(d) All of above
51. Which is most popular variety of roses in protected cultivation in India?
~~(a) Grand gala~~
(c) Konfetti
(b) First Red
(d) All of above
52. Which colour roses are most popular?
~~(a) Red~~
(c) Yellow
(b) Pink
(d) White
53. Roses with stem length of around cm are preferred in these days.
(a) 100
(c) 30
(b) 80
~~(d) 50~~
54. In greenhouse how many stems are expected from one m² area.
(a) 100
~~(c) 400~~
(b) 200
(d) 600
55. In cut roses minimum vase life should be days.
(a) 10
(c) 20
(b) 8
~~(d) 12~~
56. In greenhouse soil temperature°C is optimum for rose cultivation.
(a) 15-18
(c) 25-28
~~(b) 22-23~~
(d) 18-20
57. Which flower is universally acclaimed as the queen of flowers?
(a) Tulip
(c) Carnation
~~(b) Rose~~
(d) Orchid
58. Which of the following method is used to extract oil from rose petals?
(a) Old fashioned field stills
(c) Steam stills
(b) Modern direct fire stills
~~(d) All of above~~
59. In *Rosa damascena* oil percentage is
~~(a) 0.03~~
(c) 0.5
(b) 0.2
(d) 0.1

60. Pyrethrum is extracted from which *Chrysanthemum* species.

- (a) *morifolium* (b) *indicum*
(c) *cinerariifolium* (d) *sinense*

61. Which type of chrysanthemum looks globular?

- (a) Incurve (b) Pompon
 (c) Anemone (d) Decorative

62. Which chemical is used for disbudding in chrysanthemum?

- (a) Oxathiin (b) MH
(c) Cycocel (d) SADH

63. Which grade is not recommended by society of American Florists for chrysanthemum?

- (a) Gold (b) Silver
 (c) Iron (d) Bronze

64. Grey mould in chrysanthemum is caused by

- (a) *Fusarium* (b) *Botrytis*
(c) *Alternaria* (d) *Septoria*

65. Which of following virus is less common in chrysanthemum?

- (a) Stunt (b) Tomato Aspermy
(c) Rosette (d) Tomato Mosaic virus

66. Which is very serious pest in chrysanthemum?

- (a) Aphid (b) Red spider mite
(c) Heliethis (d) Thrips

67. Which of the following is commonly known as Peruvian lily?

- (a) *Gladiolus* (b) Kaifer lily
(c) Nargis (d) *Alstroemeria*

68. Gerbera is native to

- (a) Australia (b) Asia
(c) America (d) Europe

69. 100-g rose fruit syrup will contain mg ascorbic acid

- (a) 10 (b) 100
(c) 150 (d) 50

70. Which of the following is commercially propagated by bulbils?

- (a) *Gladiolus* (b) Lily
(c) Carnation (d) Rose

71. Gray mould of cut roses can be controlled by dipping in

- (a) NaCl (b) Urea
 (c) NaOCl (d) KCl

72. Which of the following is the emerging cut flower in the sub-tropics in the world?

- (a) *Bouvardia* (b) *Bougainvillea*
(c) Sweet pea (d) *Aspidistra*

73. Vase life of *Bouvardia* cut flowers is about days.

- (a) 2 (b) 12
(c) 20 (d) 30

74. Which of the following has highly fragrant cut flowers?

(a) Tulip

(b) Gerbera

(c) Freesia

(d) Dahlia

75. Which of the following shrub has gained popularity as cut flower in the world?

(a) Hypericum

(b) Jasmine

(c) Crossandra

(d) Aucuba

KEY

(A) Multiple Choice Questions

1. Which city is regarded as foliage capital of the world?
(a) Washington (b) Sydney
(c) Florida (d) Tokyo
2. Which of the following is the largest importer of cut greens?
(a) China (b) the Netherlands
(c) UK (d) India
3. From Asia which is the leading exporter of cut greens?
(a) India (b) Japan
(c) Singapore (d) China
4. Which of the following is not very common cut green crop?
(a) Euphorbia (b) Asparagus
(c) Eucalyptus (d) Sword fern
5. Which of the following is not common conifer for cut green?
(a) Podocarpus (b) Taxus
(c) Chir pine (d) Cupressus
6. Which of the following herbaceous perennial is not good for cut foliage?
(a) Lycopodium (b) Hosta
(c) Adiantum (d) Impatiens
7. Which of the following is not a fern grown for cut foliage in the world?
(a) Adiantum (b) Rumohra
(c) Hosta (d) Cyathea
8. Cut foliage of most of species is stored at a temperature of° C.
(a) 2-5 (b) 10-15
(c) 20-25 (d) Any temperature

-
9. Which of the following fern is most popular cut green?
- (a) Polypodium (b) Pteris
 (c) Rumhora (d) Adiantum
10. Which of the following palm produces most popular cut green?
- (a) Caryota (b) Chamaedorea
(c) Phoenix (d) None of these

EXERCISE

(A) Multiple Choice Questions

1. Which of following is not used for making garlands?
(a) Marigold (b) Crossandra
 (c) Gladiolus (d) Chrysanthemum
2. Floral bangles and crowns are made from
(a) Jasmine (b) Tuberose
(c) Chandni (d) All of these
3. Which of following are not commonly seen in paintings of Ram and Sita?
(a) Garlands (b) Bangles
 (c) Buttonhole (d) Bajubandhs

4. Poet Kalidasa in his epics *Meghaduta* mentioned that the women decorate their hairs with.....
 - (a) Lotus
 - (b) Kadamba
 - (c) Champa
 - (d) Aster
5. Flowers of *Albizia lebbek* (Sirish) are used for decorating
 - (a) Wrist
 - (b) Neck
 - (c) Hairs
 - (d) Ears
6. Which of following is not used for making gajra
 - (a) Crossandra
 - (b) Barleria
 - (c) Michelia
 - (d) Marigold
7. Which of following is used singly for decorating hairs.....
 - (a) Rose
 - (b) Crossandra
 - (c) Tuberose
 - (d) Jasmine
8. Which of following orchid flowers are used for hair decoration in Hawaii?
 - (a) *Dendrobium*
 - (b) *Phaius*
 - (c) *Cattleya*
 - (d) *Arides*
9. Veni is very common in Bharat Natyam dance in South India is made from
 - (a) Jasmine
 - (b) Tuberose
 - (c) Crossandra
 - (d) All of above
10. Drawing of various pictures or figures with the help of dry colours or coloured paste on the floor is known as
 - (a) Painting
 - (b) Picturesque
 - (c) Rangoli
 - (d) Any of above
11. Wreaths are laid down to pay respect to
 - (a) Guest coming to house
 - (b) See off a friend
 - (c) Departed soul
 - (d) All of above
12. Bouquets are not presented on/for
 - (a) Birthday
 - (b) Welcoming a guest
 - (c) Departed soul
 - (d) Marriage function
13. Decorating pockets and coat collars with a single flower is known as
 - (a) Veni
 - (b) Bangle
 - (c) Corsage
 - (d) Any of above
14. Maximum acreage is under which loose flower in India?
 - (a) Rose
 - (b) Marigold
 - (c) Carnation
 - (d) China aster
15. Inter-specific hybrids are very common in which loose flower?
 - (a) China aster
 - (b) Barleria
 - (c) Marigold
 - (d) Rose
16. Tuberose belongs to family
 - (a) *Liliaceae*
 - (b) *Iridaceae*
 - (c) *Amaryllidaceae*
 - (d) *Asparagaceae*

17. Which of the following is very common cut flower, loose flower or pot plant in short days?
(a) Rose
(c) Tuberose
 (b) Chrysanthemum
(d) Jasmine
18. White and yellow cultivars of chrysanthemum are grown for loose flowers in which region of India?
(a) North
(c) East
(b) West
 (d) South
19. Which of the following loose flower is not a shrub?
 (a) Tuberose
(c) Crossandra
(b) Jasmine
(d) Barleria
20. Which of the following loose flowers can not be stored in cold storage below 15°C?
(a) Rose
(c) Chrysanthemum
 (b) Crossandra
(d) All of these

EXERCISE

A. Multiple Choice Questions

- _____ can decorate the office or home from months to years.
(a) Cut flowers (b) Dry flowers
(c) Cut foliage (d) All of these
- Which of the following is characteristic of dry flowers?
(a) Aesthetics (b) Longevity
(c) Nobility (d) All of these
- Which of the following was largest importer of dry flowers during 2012?
(a) UK (b) Spain
(c) UAE (d) Russia
- Which of the following was exporter of dry flowers during 2012?
(a) Netherland (b) Australia
(c) South Korea (d) Singapore
- Which of the following flowers is not grown for dry flowers?
(a) Straw flower (b) Paper flower
(c) Tulip (d) Statice
- Indian export of dry flowers constitute about%
(a) 10-15 (b) 60-65
(c) 20-30 (d) 80-90
- The main dry flower product being exported from India is.....
(a) Lotus pods (b) Hybrid lilies
(c) Rose (d) None of these
- _____ is the largest dry flower exporting company from India.
(a) Cosco Flora (b) Ramesh Flower Ltd. Tuikerin
(c) Deccan Flora (d) Kasturi Flowers Ltd.
- Most of the companies exporting dry flowers are situated at
(a) Tuticorin (b) Shimla
(c) Bangalore (d) Goa
- _____ a famous product of dry flowers is very common in Europe.
(a) Wall sceneries (b) Potpourris
(c) Pot plants (d) Flower arrangements
- The plant material suitable for drying should be resistant to
(a) Moulds (b) Toxins
(c) Noxious odours (d) All of these
- _____ means to dry something under artificially produced heat through controlled temperature, humidity and air flow.
(a) Cooling (b) Dehydration
(c) Desiccation (d) None of these
- Which of the following has beautiful natural dried fruits?
(a) Amaltas (b) Bael
(c) Pines (d) All of these

- _____ has beautiful natural dried seeds.
(a) Indian liquorice (b) Hedera
(c) Marigold (d) Wood rose
- Which of the following is most suitable for air drying?
(a) Paper flower (b) Anaphalis
(c) Straw flower (d) All of these
- Any material which removes moisture without reacting with it is known as.....
(a) Desiccant (b) Dehydrator
(c) Absorbent (d) Drier
- The desiccant should have an ideal size of mm.
(a) 1-2 (b) 0.02-0.2
(c) 2-5 (d) All of these
- Which of the following is suitable desiccant for flower drying?
(a) Silica gel (b) Sand
(c) Boric acid (G) (d) All of these
- In hot air oven which is the optimum temperature (°C) for drying?
(a) 30-40 (b) 80-90
(c) 40-60 (d) Any of these
- Which of the following is the quickest method of flower drying?
(a) Microwave (b) Hot air oven
(c) Solar dryer (d) Boom drying
- _____ drying is done at very low temperature up to -35°C.
(a) Vacuum (b) Freeze
(c) Cool (d) Air
- Which of the following are dried by water drying method?
(a) Hydrangea (b) Corn flower
(c) Baby's breath (d) All of these
- _____ dried flowers are used for making greeting cards.
(a) Air (b) Embedded
(c) Press (d) Freeze
- Which of the following is not used for preserving flowers?
(a) Sugar (b) Polyols
(c) KCl (d) H₂SO₄
- Which of the following is not a serious pest of dry flowers?
(a) Mice (b) Silver fish
(c) Book lice (d) Caterpillars

KEY

Multiple Choice Questions

- | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (b) | 2. (d) | 3. (a) | 4. (a) | 5. (c) | 6. (b) | 7. (d) | 8. (b) |
| 9. (a) | 10. (b) | 11. (d) | 12. (b) | 13. (d) | 14. (a) | 15. (d) | 16. (d) |
| 17. (b) | 18. (d) | 19. (c) | 20. (a) | 21. (b) | 22. (d) | 23. (c) | 24. (d) |
| 25. (d) | | | | | | | |

A. Multiple Choice Questions

1. CO₂ concentration in greenhouse for rose growing should be ppm
(a) Upto 500 (b) 4000-6000
 (c) 1000-3000 (d) 500-1000
2. Optimum day temperature for rose growing is°C
(a) 15-20 (b) 25-30
(c) 10-15 (d) 25-35
3. In greenhouse optimum plant density of rose per hectare has been estimated thousand plants.
(a) 20-30 (b) 30-40
 (c) 80-100 (d) 60-70
4. Black spot disease in roses is caused by
(a) Diplodea (b) Diplocarpon
(c) Alternaria (d) Botrytis
5. Coals and bark are important constituents of potting media for growing
(a) Rose (b) Orchid
(c) Tulip (d) Bryophyllum

6. The planting density of chrysanthemum in greenhouse is optimum per m²
 (a) 64 (b) 32
 (c) 48 (d) 16
7. In India who has introduced climate controlled green house.
 (a) ICAR (b) Mahyco Seed Co.
 (c) Indo-American Hybrid Seed Co. (d) Sutton & Sons
8. How much area is under greenhouses in Indo-American Hybrid Seed Co.?
 (a) 5 ha (b) 2 ha
 (c) 8 ha (d) 20ha
9. Which of following is not a suitable greenhouse covering material in hills?
 (a) Glass (b) Fibber glass
 (c) Polythene (d) Polycarbonate
10. Which of following greenhouse structure is most suitable to hilly areas? Indian Cod³?
 (a) Gable (b) Quonset
 (c) Ground to ground (d) Tunnel ↓
Quonset.
11. Maximum operation cost of greenhouse in N.I. plains is from
 (a) Heating (b) Cooling
 (c) Watering (d) Shading
12. Normal humidity in greenhouses should be%
 (a) 40-50 (b) 60-65
 (c) 70-80 (d) 80-100
13. Light intensity in greenhouse is not controlled by.....
 (a) Aluminium (b) White nylon
 (c) Black nylon (d) Tarpaulin
14. Optimum electrical conductivity in greenhouse is ds/m
 (a) 3-5 (b) 1-3
 (c) 5-8 (d) upto 1
15. Soil decontamination in greenhouse is done by.....
 (a) Heat treatment (b) Fumigation
 (c) Solarization (d) All of above
16. For, establishing greenhouse which of the following is least cared during feasibility study?
 (a) Economics (b) Climate
 (c) Type of crop (d) Labour
17. Optimum growing temperature in green house for *Anthurium* culture is °C
 (a) 15-20 (b) 20-27
 (c) 25-35 (d) None of these
18. The optimum night temperature of chrysanthemum at bud initiation should be °C
 (a) 10-12 (b) 15.5-16.5
 (c) 13.5-15.5 (d) 18-20

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ORNAMENTALS IN GREENHOUSE

19. Which of following grow luxuriantly in high humidity?
- (a) Anthurium
 - (b) Orchid
 - (c) Rose
 - (d) Lily
20. Portable mini tunnels are very useful for growing healthy
- (a) Cut flowers
 - (b) Cut greens
 - (c) Nursery
 - (d) Pot plants

EXERCISE

(A) Multiple Choice Questions

1. About 70 percent of longevity of cut flowers is determined
(a) At harvest (b) Post harvest handling
(c) Genetics of plant (d) Management factors
2. Two conflicting processes of growth-promotion and retardation of metabolism are found in
(a) Foliage (b) Flowers
(c) Vegetables (d) Fruits
3. In Normal air how much ethylene is present?
(a) 1 ppm (b) 100 ppb
(c) 3-5 ppb (d) 5-10 ppb
4. How much ethylene concentration is detrimental to cut flowers?
(a) 10-20 ppb (b) 1-5 ppm
(c) 50-100 ppb (d) 30-50 ppb
5. A treatment after harvesting by using water to restore turgidity is known as
(a) Pulsing (b) Loading
(c) Hardening (d) None of these

6. Treatment of cut flower after harvesting with high concentration of sugar is known as
 (a) Pulsing (b) Hardening
 (c) Loading (d) (a) and (c)
7. For pulsing optimum room temperature is °C
 (a) 10-15 (b) 20-25
 (c) 25-30 (d) 15-22
8. Optimum pH of holding solution should be
 (a) 2-3 (b) 4-5
 (c) 6-7 (d) 7-10
9. Which of the following commercial formulation are used as preservative?
 (a) Seven up (b) Petal life
 (c) Oasis (d) All of these
10. CO₂ and ethylene are removed when atmospheric pressure is atm.
 (a) 1 (b) 10
 (c) 0.1 (d) 2
11. Bent neck in roses is very common when grown at Light intensity
 (a) High (b) Medium
 (c) Low (d) At any
12. The substrate for ethylene production in plant is
 (a) Methionine (b) Cyathine
 (c) Quonine (d) Digene
13. Which of following is less sensitive to ethylene?
 (a) Carnation (b) Gerbera
 (c) Orchids (d) Snapdragon
14. Which of following block xylem of cut flowers?
 (a) Bacteria (b) Yeast
 (c) Molds (d) All of these
15. Which of following is effective bactericide?
 (a) Silver Nitrate (b) HQC
 (c) Sugar (d) Cobalt Nitrate
16. Which of following is most important ethylene inhibitor?
 (a) 1-MCP (b) Sugar
 (c) Citric acid (d) Nickel chloride
17. Which is most common germicide?
 (a) Salt of HQ (b) Silver nitrate
 (c) Aluminium sulphate (d) Silver Thiosulphate
18. Which of following is not ethylene inhibitor?
 (a) AVG (b) MVG
 (c) NAA (d) AOA

19. Which of following is strongest senescence stimulator?
 (a) Abscissic acid (ABA) (b) BA
 (c) PBA (d) AOA
20. Which of following is used as a wetting agent?
 (a) Tween 20 (b) Soap
 (c) Washing powder (d) None of above
21. Impregnation of cut flowers is very common in
 (a) Aster (b) Gerbera
 (c) Carnation (d) All of these
22. Which of following pot plant is highly sensitive to ethylene?
 (a) Euphorbia (b) Scindapsus
 (c) Cordyline (d) Nephrolepis
23. Which is not moderately sensitive to ethylene?
 (a) Dracaena (b) Dieffenbachia
 (c) Asparagus (d) Schefflera
24. Which of following is not highly sensitive to ethylene?
 (a) Achimenes (b) Fuchsia
 (c) Hibiscus (d) Primula
25. Which of following is less sensitive to ethylene?
 (a) Chrysanthemum (b) Kalanchoe
 (c) Begonia (d) Beloperone
26. Green Glo is used for improving longevity of pot plants.
 (a) Flowering (b) Foliage
 (c) Fruiting (d) None of these
27. Which of following is highly sensitive to chilling injury?
 (a) Tulip (b) Lily
 (c) Anthurium (d) Freesia
28. Which of following is less sensitive to chilling injury?
 (a) Rose (b) Bird of paradise
 (c) Poinsettia (d) Cattleya
29. Ethylene in cold storage is removed by
 (a) Ventilation (b) UV light
 (c) Low pressure (d) All of these
30. Optimum light in cold storage is Lux.
 (a) 100-200 (b) 1000-15000
 (c) 500-1000 (d) 2000-5000
31. Optimum cold storage temperature for carnation is °C.
 (a) 0-1 (b) 1-2
 (c) 4-5 (d) 10-12
32. Bird of paradise flowers are stored at °C.
 (a) 10-15 (b) 8-10
 (c) 1-2 (d) 4-5

33. Un-rooted carnation cuttings can be stored at °C for 2 months.
 (a) 2-5
 (c) 5-7
 (b) 5-0
 (d) 10-12
34. Water disinfection is done by
 (a) Sodium chloride
 (c) Potassium chloride
 (b) Sodium hypochloride
 (d) Tween 20
35. Which of following is not commonly used as water disinfectant?
 (a) UV rays
 (c) Sodium hypochloride
 (d) Copper sulphate
 (b) Aluminium sulphate
36. Optimum dose of gamma radiation for prolonging vase life is K rad.
 (a) 10-15
 (c) 50-100
 (b) 1-2
 (d) 30-40
37. In low pressure storage (LPS) pressure in storage room is reduced to atm.
 (a) 1
 (c) 5
 (d) 0.1
 (b) 10
38. Sanitation of storage room is done by ppm solution of sodium hypo chloride.
 (a) 10
 (c) 300
 (b) 100
 (d) 1000
39. Which is not suitable for dry transportation?
 (a) Carnation
 (c) Lily
 (d) Iris
 (b) Chrysanthemum
40. Geotropic bending during transportation is common in
 (a) Gladiolus
 (c) Lupine
 (d) All of these
 (b) Snapdragon
41. In room flower vase should not be kept near
 (a) Fan
 (c) Heater
 (d) All of these
 (b) Oven
42. Flower stems of the following should be normally kept in boiling water for seconds.
 (a) Rose
 (c) Lily
 (b) Poinsettia
 (d) Tulip
43. In homes, which of following is used to increase vase life?
 (a) Salt
 (c) Glucose
 (b) Sugar
 (d) Oil
44. In normal air CO₂ concentration is about ppm.
 (a) 100
 (c) 500
 (b) 300
 (d) 50
45. The period for which flowers of a species remain presentable when kept in vases is known as
 (a) Vase life
 (c) Shelf life
 (d) All of these
 (b) Display life

46. Which of following is complex morphological unit?
 (a) Seed (b) Vegetable
 (c) Fruit (d) Flower
47. Salt of 8-Hydroxy Quinoline normally
 (a) Acidity water (b) Improve water balance
 (c) Act germicide (d) All of above
48. Which of following act as acidifying agent?
 (a) Sugar (b) Citric acid
 (c) Silver Nitrate (d) Cobalt Nitrate
49. Bluing of rose petals is due to
 (a) Accumulation of ammonia (b) More salt
 (c) Less sugar (d) Bacteria
50. Which of following phytohormone is used for improving vase life?
 (a) BA (b) IBA
 (c) GA (d) PBA
51. Which of following act as bactericide in vase solution?
 (a) DICA (b) DDMH
 (c) 8-HQC (d) All of these
52. Stem plugging in cut flowers is reduced by
 (a) Low pH up to 3.5 (b) Calcium Nitrate
 (c) Azide (d) All of above.
53. In pecooling temperature of flower is reduced to °C with in 1or 2 hours.
 (a) 5 (b) 1
 (c) 10 (d) 20
54. CO₂ concentration in greenhouses is optimum ppm for high vase life.
 (a) 100 (b) 1000
 (c) 30000 (d) 300
55. Which of the following constitute about 40 percent of total cut foliage in global trade?
 (a) Asparagus (b) Leather leaf fern
 (c) Podocarpus (d) Eucalyptus
56. Hypobaric storage is also known as
 (a) Controlled atmospheric storage (b) Modified atmospheric storage
 (c) Low pressure storage (d) All of above
57. Which of following is not a step in chain of life?
 (a) Refrigeration (b) Use of preservative
 (c) Selection of cultivar (d) Sanitation
58. Which salt of following is detrimental to flower-longevity?
 (a) Chlorine (b) Fluorine
 (c) Aluminium (d) Calcium
59. 'Bull head' roses are produced due to.....
 (a) Thrips infestation (b) Insufficient CHO
 (c) Hard pruning (d) All of these

60. Limp neck is a disorder of
- (a) Gladiolus
(c) Tulip
- (b) Rose
(d) Carnation
61. Yellow rose cultivars are harvested at bud stage.
- (a) Tight
(c) Half open
- (b) Slightly loose
(d) None of these
62. Which of following is not serious fungus in cut roses?
- (a) Pythium
(c) Penicillium
- (b) Botrytis
(d) Alternaria
63. Which of following accelerate senescence in cut carnation?
- (a) Abscissic acid
(c) High temperature
- (b) Ethylene
 (d) All of above
64. Quilling of florets is common disorder in
- (a) Chrysanthemum
(c) Dahlia
- (b) Carnation
(d) Tulip
65. Petal burn in chrysanthemum is due to deficiency of
- (a) Copper
(c) Calcium
- (b) Boron
(d) Potassium
66. Optimum temperature for long term holding of chrysanthemum is °C.
- (a) 0-1
(c) 5-9
- (b) 2-5
(d) 10-12
67. A lip opposite to odd sepal in orchid flower is known as
- (a) Column
(c) Keel
- (b) Labellum
(d) None of these
68. Chilling injury is common in
- (a) Cattleya
(c) Vanda
- (b) Cymbidium
 (d) Paphiopedilum
69. Orchids under normal conditions can be stored upto 2 weeks at °C.
- (a) 5-7
(c) 0-2
- (b) 2-5
(d) 10-12
70. Short days at 1-2 leaf stages in gladiolus leads to
- (a) Bud blasting
(c) Poor spike
- (b) Blind shoot
(d) Multiple-spike
71. Topple disorder in gladiolus is because of deficiency?
- (a) Boron
(c) Nitrogen
- (b) Calcium
(d) Potassium
72. Deficiency of Nitrogen and Calcium in Tulip result in of flower stem.
- (a) Topple
(c) White tipping of perianth
- (b) Geotropic bending
(d) Abnormal anther development
73. Ancymidol is used in to reduce elongation of last inter-node.
- (a) Lily
 (c) Tulip
- (b) Daffodil
(d) Carnation

74. Colour break disorder of spathe is common disorder in
(a) Calla Lily
(c) Rose
(b) Anthurium
(d) Gerbera
75. Botanical name of baby's breath flower is
(a) *Gypsophilla paniculata*
(c) *Antirrhinum majus*
(b) *Gerbera jamesonii*
(d) None of these
76. Bud blasting in Iris is caused by
(a) Poor light
(c) Water stress
(b) High temperature
(d) All of above
77. Which of following preservative show phytotoxicity in Daffodil?
(a) 8-HQC
(c) Citric acid
(b) STS
(d) Nickel chloride
78. Epinasty in poinsettia can be reduced by spraying
(a) Sugar
(c) Cobalt Nitrate
(b) Silver Nitrate
(d) Ancyimidol
79. Optimum CO₂ concentration for production of potted geranium is ppm.
(a) 300-500
(c) 100-300
(b) 500-700
(d) 80-1000
80. Leaf scorching in lilies is due to high
(a) Nitrogen
(c) Fluorine
(b) Potassium
(d) Sulfur

KEY

(A) Multiple Choice Questions

- Who collected drops of rose oil from canal filled with rose petals and named it 'Attre Jahangiri'?
(a) Shahjahan
(c) Mumtaj
(b) Noorjahan
(d) Noormahal
- According to 'Ibne khal doon' an industry producing perfume said that rose oil and rose water existed during 800-900 A.D. in which of the following country?
(a) Turkey
(c) Persia
(b) Bulgaria
(d) UAE
- Who discovered rose oil in 9th century?
(a) Ibrahim
(c) Akbar
(b) Babur
(d) Avi Cena
- Which of the following is not a *Rosa* species grown for oil extraction?
(a) *indica*
(c) *bourboniana*
(b) *damascena*
(d) *centifolia*
- Which of the following is not a cultivar of *Rosa damascena*?
(a) Noorjahan
(c) Himroz
(b) Sherbat
(d) Jawala
- Which country is the largest producer of rose oil?
(a) Bulgaria
(c) India
(b) Italy
(d) China
- One kg rose oil is extracted from flowers.
(a) 10 q
(c) 1.5 ton
(b) 3-5 ton
(d) 50 kg
- In which state of India distillation of rose is not done?
(a) Punjab
(c) Rajasthan
(b) Uttar Pradesh
(d) Kerala
- Rosa damascena* is commonly propagated by
(a) Seed
(c) Budding
(b) Stem cutting
(d) All of these
- Himroz cultivar of *Rosa damascena* is developed at
(a) IHBT Palampur
(c) NBRI Lucknow
(b) IARI New Delhi
(d) IIHR Bangalore
- Which of the following is not a species of *Jasminum* grown for oil extraction?
(a) *sambac*
(c) *grandiflorum*
(b) *humile*
(d) *auriculatum*
- Jasmine distillation units are commercially set up in state of
(a) Manipur
(c) Delhi
(b) Punjab
(d) Tamil Nadu

13. Which country is the largest producer of jasmine oil?
 (a) Egypt (b) Sri Lanka
 (c) China (d) USA
14. Which species of *Jasminum* is grown for high quality perfume?
 (a) *sambac* (b) *grandiflorum*
 (c) *multiflorum* (d) *flexile*
15. Jasmine word is derived from word 'Yasmine'.
 (a) Italian (b) Latin
 (c) Arabian (d) Tamil
16. Which of the following term is not common in perfumery?
 (a) Otto (b) Absolute
 (c) Concrete (d) Ethylene
17. Which of the following is not oil extraction method in perfumery?
 (a) Enfleurage (b) Maceration
 (c) Propeller (d) Solvent extraction
18. Which of the following is most common solvent in perfumery?
 (a) Petroleum ether (b) Terpene
 (c) Acetone (d) Distilled water
19. Seeds of which of the following are used in extraction of jasmine oil?
 (a) Mustard (b) Wheat
 (c) Sesame (d) Castor
20. One ton flowers of jasmine yield kg absolute oil.
 (a) 0.5 (b) 1.3-1.5 kg
 (c) 4-5 kg (d) 10-12 kg
21. Which of the following method is not used to extract rose oil?
 (a) Old fashioned field stills (b) Modern direct fire stills
 (c) Steam stills (d) Sesame seed moistening extraction
22. The oil content is more in Damask flowers produced at
 (a) Delhi (b) Lucknow
 (c) Palampur (d) Jaipur
23. Damask rose flowers should be harvested at for more oil extraction.
 (a) 8-10 AM (b) 10-12 AM
 (c) 4-6 PM (d) Any time
24. The concrete content in carnation flowers is about %.
 (a) 1.0-2.0 (b) 0.2-0.3
 (c) 2.0-3.0 (d) 0.02-0.03
25. Which country is the largest producer of carnation perfume?
 (a) France (b) India
 (c) China (d) USA
26. Which country is the largest producer of *Michejja champaca* perfume?
 (a) Bulgaria (b) China
 (c) Russia (d) Egypt

27. Which species of *Tagetes* is commercially grown for oil extraction?
 (a) *tenuifolia* (b) *erecta*
 (c) *patula* (d) *minuta*
28. Which of the following crop is not grown in Chamba (HP) for oil extraction?
 (a) Lavender (b) Geranium
 (c) Narcissus (d) Damask rose
29. Which of the following is not a crop grown for perfumery?
 (a) Rose (b) Liliun
 (c) Geranium (d) Carnation
30. Which of the following is not a cultivar of tuberose?
 (a) Rajat (b) Rajat Rekha
 (c) Swarna Rekha (d) Subhasini
31. Which of the following tree is not grown for perfumery?
 (a) *Araucaria* (b) *Michelia*
 (c) *Magnolia* (d) *Plumeria*
32. Roots of which of the following are used for oil extraction?
 (a) Sweet pea (b) Iris
 (c) Gardenia (d) Rose
33. Which of the following annual is commercially grown for oil extraction?
 (a) Pansy (b) Paper flower
 (c) Sweet pea (d) Salvia
34. Which of the following shrub is grown for oil extraction?
 (a) *Gardenia* (b) *Cestrum*
 (c) *Hibiscus* (d) *Sambucus*
35. Which of the following is essential for storing perfume?
 (a) Cool temperature (b) Dark
 (c) Air tight container (d) All of these

KEY

A. Multiple Choice Questions

1. Bonsai culture actually has origin in
 (a) China
 (b) Japan
 (c) Singapore
 (d) Korea
2. In the world who has popularized the bonsai cultivation?
 (a) Korean
 (b) Japanese
 (c) Chinese
 (d) American
3. Which of the following is not a bonsai style?
 (a) Raft
 (b) Wind-swept
 (c) Broom
 (d) Globular

4. Which type of following container is good for cascade style bonsai?
(a) Oval (b) Round
 (c) Tall square (d) Square ✓
5. Which of the following wire is most suitable for making bonsai?
(a) Plastic (b) Copper
(c) Iron (d) All of these
6. Which of the following shrub is good for bonsai?
 (a) Bougainvillea ✓ (b) Jasmine
(c) Poinsettia ✓ (d) Opuntia
7. Which of the following fruit tree is not good for bonsai?
(a) Guava ✓ (b) Fig
 (c) Papaya ✓ (d) Orange
8. Which of the following tree is not good for bonsai?
 (a) Rubber plant (b) Jacaranda
(c) Banyan (d) Pipal ✓
9. Which of the following climber is good for bonsai?
(a) Duck flower (b) Moon flower
 (c) Petrea (d) Quamoclit
- ~~10.~~ Which of the following does not provide good nutrition to bonsai?
(a) Slurry (b) Chemical fertilizers
(c) Groundnut cake (d) Neem cake

1. Japanese arrangement of flowers is known as
 (a) Ikebana - (b) Tatebana
 (c) Suchigama (d) All of above -
2. Japanese flower arrangement was started by Budhist Monk in 621 A.D.
 (a) Morimono (b) Semmu -
 (c) Hira niwa (d) Rayoanji
3. Sogestu a style of Japanese flower arrangement differs from Ikebana in the following way.....
 (a) No Basic principle followed
 (b) Only few basic principles are used
 (c) All basic principles are used but students can use their creativity
 (d) All of above
4. Which of following is not the basic line of Ikebana?
 (a) Filler (b) Man
 (c) Earth (d) Heaven
5. Which of following is refereed as *natural* Ikebana Style?
 (a) Morimono (b) Moribana -
 (c) Jiyubana (d) Nagiere
6. In Nagiere flower arrangement, which of following is most appropriate flower vase?
 (a) Round (b) Oval
 (c) Tall (d) Flat
7. Which of following is known as free flower arrangement?
 (a) Jiyubana (b) Moribana
 (c) Zenei-ka (d) None of above.
8. Which of following arrangement does not simulate nature?
 (a) Sogetsu (b) Zenei-ka -
 (c) Ikenobo (d) None of above
9. In which of following arrangement fruits, flowers and foliage is used to make it more natural.
 (a) Ikenobo (b) Morimono -
 (c) Nageire (d) All of above
10. In Japanese language fillers are known as
 (a) Shin (b) Soe
 (c) Jushi - (d) Hikae
11. Heaven is placed in flower vase at an angle of°
 (a) 45 (b) 10
 (c) 30 (d) 75
12. In Japanese language man is known as.....
 (a) Soe - (b) Jushi
 (c) Sogestu (d) Manni

13. Japanese flower arrangement is based on themes.
(a) Religious (b) Spiritual
(c) Social (d) Artistic
14. English flower arrangement is based on themes by using fruits, flower and foliage for collective mass effect.
(a) Artistic (b) Imaginary
(c) Variety (d) All of above
15. In western style of flower arrangement generally height of flower is fixed times of flower vase.
(a) 2 (b) 1½
(c) Equal (d) 3
16. In western style of arrangement emphasis is given on colour so which of following is most appropriate.
(a) Mono (b) Mixed
(c) Shades of a colour (d) Any of above
17. World association of flower arranger was established in
(a) 1959 (b) 1989
(c) 1971 (d) 1981
18. Which of the following is not a principle of interior decorations?
(a) Harmony (b) Balance
(c) Contrast (d) Line
19. In addition to flowers, fruits and vegetables are also used in floral arrangement.
(a) Moribana (b) Nageire
(c) Jiyubana (d) Morimono
20. Which of the following type of Ikebana resembles English flower arrangement?
(a) Morimono (b) Moribana
(c) Jiyubana (d) Nageire

KEY

EXERCISE

A. Fill in the Blanks

1. Dr RR Pal is an important root stock of ... *Bougainvillea*.
2. *A.P.P.U.* is a no pinch no stake cultivar of chrysanthemum
3. *f.u.s.o...* is a cultivar of coreopsis.
→ *Tara*.

4. Manali is a cultivar of Dahlia developed at IARI regional station, Katrain.
5. Mayur is a cultivar of Gladiolus developed at IARI New Delhi.
6. Mohini aneuploid cultivar of rose developed at IARI is patented in USA.
7. Raktagandha a cultivar of rose for cut flowers is developed at IARI
8. Swarna Rekha is a cultivar of tuberose developed by mutation at NBRI.
9. Dhiraj is a cultivar of gladiolus resistant to Fusarium wilt.
10. Dr..... was first cultivar of rose developed in India by BK Roychowdhury.
SD Mukherjee.

KEY

Fills in the Blanks

- | | | |
|---------------------|-----------------|--------------|
| 1. Bougainvillea | 2. Appu | 3. Pusa Tara |
| 4. Dahlia | 5. gladiolus | 6. Mohini |
| 7. IARI New Delhi | 8. Swarna Rekha | 9. Dhiraj |
| 10. Dr SD Mukherjee | | |

EXERCISE

(A) Multiple Choice Questions

1. Which of the following is not the element of landscaping?
(a) Form
(b) Texture
(c) Rhythm
(d) Colour
2. Which of the following is not the principle of landscaping?
(a) Simplicity
(b) Line
(c) Accent
(d) Balance

3. Mass contained within in extremities of growth is known as
- (a) Habit
(b) ~~Form~~
(c) Silhouette
(d) None of these
4. Design with definite use of plant to serve certain aesthetic or utility purpose is known as
- (a) Landscape
(b) Landscaping
(c) ~~Garden~~
(d) All of above.
5. The design and alternation of a portion of land by use of planting material and land reconstruction is known as
- (a) ~~Landscaping~~
(b) Gardening
(c) Design
(d) Floriculture
6. Representation of the structure of any surface is known as
- (a) ~~Texture~~
(b) Canopy
(c) Design
(d) Floriculture
7. The determination of a character of an object to serve certain purpose known in advance is called as
- (a) Silhouette
(b) ~~Design~~
(c) Landscape
(d) None of these
8. Elements of outdoor room which are not essential, but make the place more usable are known as
- (a) Accessories
(b) Luxuries
(c) ~~Enrichment items~~
(d) All of above.
9. Which of following is not a tangible enrichment item?
- (a) Rock boulder
(b) ~~Sound of water fall~~
(c) Water
(d) Animal
10. Which is the most interesting use of lighting in garden?
- (a) ~~Silhouette~~
(b) Shadow
(c) Walkway
(d) None of these
11. Which of following is not common surfacing material in the garden?
- (a) Paving
(b) Turf
(c) ~~Shrub~~
(d) Ground cover
12. Which is not intangible enrichment item?
- (a) Fragrance
(b) Wind whistling
(c) ~~Sundial~~
(d) Moving birds
13. Which of the following is not an element of landscaping?
- (a) Colour
(b) Texture
(c) Line
(d) ~~Rhythm~~
14. An easy connected path along which the eye will travel in any direction from one point to another is known as
- (a) Scale
(b) Balance
(c) ~~Rhythm~~
(d) Line

15. Rhythm in a garden is created through
- (a) Repetition of shapes (b) Progression of sizes
(c) Continuous line movement (d) All of above
16. Which of following is an element of landscaping?
- (a) Balance (b) Habit
(c) Proportion (d) Focalization
17. Punjabi folk dance and beat of marshal music are common example of
- (a) Rhythm (b) Mobility
(c) Texture (d) Habit
18. Most of conifers havecanopy shape.
- (a) Columnar (b) Ovoid
(c) Wide oval (d) Pyramidal
19. Which has fine texture foliage?
- (a) Jacaranda (b) Silver oak
(c) Deodar (d) All of these
20. Which has drooping growth habit?
- (a) *Salix babylonica* (b) Bottle brush
(c) *Pinus paptula* (d) All of these
- # 21. Area of the home which is viewable from the street is known as area.
- (a) Public (b) Front
(c) Approach (d) All of these
22. Part of home landscape which provides room for necessities is known as area.
- (a) Service (b) Family
(c) Approach (d) All of above
23. Mobility in garden is created by use of
- (a) different size (b) evergreen trees.
(c) deciduous trees (d) evergreen shrubs
24. In home garden total area under lawn should not be more than%.
- (a) 70 (b) 30
(c) 20 (d) 40
25. Shrubbery borders in home garden are kept around %
- (a) 10-15 (b) 20-30
(c) 15-20 (d) 30-40
26. Accent draws attention of human being through
- (a) Colour (b) Shape
(c) Texture (d) All of these
27. Which of the following is not a part of texture?
- (a) Fine (b) Large
(c) Medium (d) Coarse
28. Selection of style of garden depends upon
- (a) Topography (b) Space
(c) Location (d) All of these

29. Trees in a garden are planted % area.
- (a) 40-50
 - (b) 15-20
 - (c) 30-40
 - (d) 25-30
30. Children playing area is not common in area of the home garden.
- (a) Family
 - (b) Service
 - (c) Private
 - (d) Public

KEY**Multiple Choice Questions**

EXERCISE

A. Multiple Choice Questions

1. What is the optimum bulk density of potting medium for growing house plants?
 (a) 0.5-0.75 g/cc
 (b) 1-1.5 g/cc
 (c) 0-0.5 g/cc
 (d) 2-3 g/cc
2. Evidence of plants grown indoor are available since BC.
 (a) 1000
 (b) 3500
 (c) 2000
 (d) 3000
3. Who is the largest importer of house plants?
 (a) Italy
 (b) India
 (c) USA
 (d) Germany
4. Total area devoted for cultivation of indoor plants in our country is hectares.
 (a) 50
 (b) 150
 (c) 100
 (d) 500

5. Non-capillary pore space in the potting media for houseplants should not be more than per cent.
- (a) 5-10 (b) 15-20
 (c) 10-15 (d) 20-30
6. Optimum water holding capacity of potting medium should be per cent.
- (a) 20-30 (b) 70-80
 (c) 50-60 (d) 30-50
7. Ferns grow successfully in potting medium having pH.
- (a) 2-3 (b) 4-6
 (c) 6-7 (d) 7-7.5
8. Soluble salt in potting medium should be ppm.
- (a) 100-200 (b) More than 500
 (c) Less than 500 (d) Upto 1000
9. Optimum C/N ratio in potting medium should be
- (a) Low (b) High
 (c) Medium (d) Any one of the above
10. Poor aeration in potting medium is caused by
- (a) Compaction (b) Over watering
 (c) Inadequate pore space (d) All of above
11. Which of the following type of containers are cheapest?
- (a) Earthen (b) Concrete
 (c) Plastic (d) Copper
12. For growing cacti, which type of pots, are most suitable.
- (a) Cement (b) Concrete
 (c) Brass (d) Plastic
13. Cane baskets are suitable for growing
- (a) Ferns (b) Orchids
 (c) Succulents (d) Begonias
14. Which of the following is most suitable to grow in dark corner of the house?
- (a) Aspidistra (b) Acalypha
 (c) Hoya (d) Marinate
15. Plants suitable for growing in sunny areas requirehours light in winter.
- (a) 1-2 (b) More than 5
 (c) 2-3 (d) Upto 5
16. Plants suitable for growing in semi-shade location require hour direct light in winter.
- (a) 1 (b) Zero
 (c) 5 (d) 2-3
17. A difference of°C in day-night temperature is most optimum for house plants.
- (a) 5-10 (b) 2-5
 (c) 10-15 (d) 0-2

18. Optimum temperature during day for house plants should be°C
 (a) 15-20 (b) 20-30
 (c) 10-15 (d) 0-2
19. Optimum soil temperature of potting medium should be°C
 (a) 10-15 (b) 20-25
 (c) 18-21 (d) 15-25
20. Optimum relative humidity in room growing house plants should be per cent.
 (a) 30-40 (b) 50-60
 (c) 70-80 (d) 100
21. When your whole family is going out for a week how plant requirement can met in the best way?
 (a) Spraying (b) Grouping of plant
 (c) Use of pebble trays (d) Use of double pots.
22. Application of fertilizer along with watering is known as
 (a) Fertilizer application (b) Liquid fertilization
 (c) Fertigation (d) None of above
23. Which is not commonly propagated by seed?
 (a) Araucaria (b) Aralia
 (c) Dracaena (d) Palm
24. In palm germination percentage after two months of seed harvesting is about
 (a) 50 (b) 80
 (c) 10 (d) 30
25. Tip cutting having 1-2 nodes is very common in
 (a) Coleus (b) Aglaonema
 (c) Dracaina (d) All of above
26. Leaf lamina cutting is very common in
 (a) Rex begonia (b) Peperomia
 (c) Ivy (d) Coleus
27. Cane cutting is very common in
 (a) Diefenbachia (b) Araucaria
 (c) Coleus (d) Philodendron
28. Air layering is not common in
 (a) Dracaena (b) Croton
 (c) Begonia (d) Aglaonema
29. Corts are commonly used to multiply
 (a) Ivy (b) Araucaria
 (c) Chlorophytum (d) Maranta
30. Spores are used to propagate
 (a) Mosses (b) Ferns
 (c) Asparagus (d) Bromeliads
31. Optimum temperature for rooting in medium is°C.
 (a) 18-22 (b) 20-30
 (c) 30-35 (d) 15-20

32. Bottom heating is very useful in propagation of
- (a) Coleus (b) Araucaria
 (c) Bougainvillea (d) Rose
33. For increasing rooting in cutting CO₂ level in growth chamber should beppm.
- (a) 100 (b) 500
 (c) 1000 (d) 1500
34. Which of following is most common rooting hormone?
- (a) IBA (b) NAA
 (c) IAA (d) GA
35. In nursery where seed are sown which irrigation method is very useful?
- (a) Subsurface irrigation (b) Mixing
 (c) Flooding (d) Through water can
36. Saddle grafting is very common in
- (a) Rose (b) Rhododendron
 (c) Bougainvillea (d) Hydrangea
37. Mound layering is common in
- (a) Hydrangea (b) Cestrum
 (c) Agave (d) Cactus
38. Patch budding is very common
- (a) Jacaranda (b) Red Gulmohar
 (c) Daphne (d) Rosewood
39. Offsets are very common to propagate.
- (a) Agave (b) Aloe
 (c) Pandanus (d) All of these
40. Division during repotting is practiced in
- (a) Maranta (b) Calathea
 (c) Ferns (d) All of these

KEY

Multiple Choice Questions

(A) Multiple Choice Questions

1. Which of the following is not a woody landscape plant?
(a) Tree (b) Climber
(c) Annual (d) Shrub
2. Which of the following landscape plants require acidic soils?
(a) Cacti (b) Succulents
(c) Palms (d) Ferns
3. The plants which shed all their leaves after the new leaves emerge are known as.....
(a) Evergreen (b) Semi-deciduous
(c) Deciduous (d) Any one of these
4. Which of the following does not affect the foliage texture?
(a) Distance (b) Temperature
(c) Density (d) Integrity
5. Which of the following palm is not grown in avenues?
(a) *Chamaedorea elegans* (b) *Cocos plumose*
(c) *Phoenix rupicola* (d) *Roystonea oleracea*
6. Which of the following landscape plant is commercially grown through seeds?
(a) Succulents (b) Palms
(c) Bamboos (d) Ferns

7. Which of the following landscape plant is commercially grown through spores?
(a) Annuals (b) Shrubs
 (c) Ferns (d) Cacti
8. Which of the following landscape plant is an ornamental grass?
 (a) *Thyrsanolaena agrostis* (b) *Arundinaria auricoma*
(c) *Arundinaria fortunei* (d) *Zamia furfuracea*
9. Which of the following landscape plant is cycad?
(a) *Portulaca grandiflora* (b) *Caryota urens*
 (c) *Zamia furfuracea* (d) *Cortaderia selloana*
10. Which of the following landscape plant is herbaceous perennial for hills?
(a) *Paeonies* (b) *Aquilegia hybrida*
(c) *Arundinaria auricoma* (d) *Areca triandra*

KEY

(A) Multiple Choice Questions

1. *Amherstia nobilis* a flowering tree has flowers.
(a) Yellow (b) Red
(c) White (d) Violet
2. *Ailanthus excelsa* is native to
(a) China (b) India
(c) Africa (d) Iran
3. *Peltophorum ferrugenum* a flowering tree has flowers.
(a) Pink (b) Red
 (c) Yellow (d) White
4. *Delonix regia* is commonly known as
 (a) Red Gulmohar (b) Yellow Gulmohar
(c) Gulmohar (d) Any of above.
5. Which of following is not conifer?
(a) *Cupressus* (b) *Casuarina*
(c) *Thuja* (d) *Abies*
6. Flowering during February-April is found in
 (a) *Amherstia* (b) *Jacaranda*
(c) Silver oak (d) *Amaltas*
7. Which of the following has beautiful fruits?
 (a) *Kigellia* (b) *Bauhinia*
(c) *Ailanthus* (d) *Delonix*
8. *Koelreuteria paniculata* flower during
(a) June-July (b) August-September
(c) March-April (d) November-December

9. *Azadirachata indica* belong to family
- (a) Meliaceae (b) Caselpiniaceae
 (c) Sapindaceae (d) None of above
10. Which of following yield nectar.
- (a) Bottle brush (b) Neem
 (c) Horse chestnut (d) All of Above
11. Which of following have drooping branches?
- (a) *Salix babylonica* (b) Bottle brush
 (c) Australian acacia (d) All of above
12. Which of following is suitable for planting alongside of canals?
- (a) Bottle brush (b) Jacaranda
 (c) Silver oak (d) All of above
13. Which of following has beautiful trunk?
- (a) *Chorisia* (b) *Araucaria*
 (c) *Bauhinia* (d) *Acacia*
14. Which of following has fragrant flowers?
- (a) Devil's tree (b) *Michelia*
 (c) *Magnolia* (d) All of above
15. Which of following trees have blotched bark?
- (a) Pride of India (b) *Platanus*
 (c) *Eucalyptus* (d) All of above
16. Which of following tree has bark with prickles?
- (a) *Erythrina* (b) *Bombax*
 (c) *Chorisia* (d) All of above
17. Botanical name of coral tree is
- (a) *Erythrina indica* (b) *Erythrina suberosa*
 (c) *Erythrina cristagalli* (d) None of above.
18. Which of following should be planted in front of a multistory building?
- (a) *Polyalthia longifolia* (b) *Sapium sebiferum*
 (c) *Jacaranda mimosaefolia* (d) *Grewia optiva*
19. A shade tree should have canopy.
- (a) Wild oval (b) Informal
 (c) Globular (d) All of above.
20. Which of following trees have beautiful fall foliage colour?
- (a) *Platanus orientalis* (b) *Sapium sebiferum*
 (c) *Acer oblongum* (d) All of above
21. Which of the following has ornamental trifid red capsules?
- (a) *Koelreuteria* (b) *Jacaranda*
 (c) *Bauhinia* (d) *Chorisia*
22. Which of the following tree was associated with Sita in Ramayana?
- (a) *Saraca indica* (b) *Polyalthia longifolia*
 (c) *Salix babylonica* (d) *Cedrus deodara*

23. Which of the following flower during November?
 (a) *Bauhinia variegata* (b) *Bauhinia purpurea*
 (c) *Bauhinia vahli* (d) None of above
24. Which of the following has white flowers?
 (a) *Dillenia indica* (b) *Bauhinia purpurea*
 (c) *Tecomella undulata* (d) *Ceiba pentandra*
25. Which of the following is a good flowering tree for high hills?
 (a) *Cedrus deodara* (b) *Rhododendron arboreum*
 (c) *Tecomella undulata* (d) *Ceiba pentandra*
26. Which of the following has coarse texture foliage.
 (a) Kanak champa (b) Jacaranda
 (c) Pine (d) Peepal
27. Which of the following is grown for flowers?
 (a) *Putranjiva roxburghii* (b) *Polyalthia longifolia*
 (c) *Delonix regia* (d) *Azadirachta indica*
28. Which has not white flowers?
 (a) *Magnolia* (b) *Plumeria*
 (c) *Lagerstroemia* (d) *Mimusops*
29. Which of following tree is grown for cut foliage.
 (a) *Podocarpus* (b) *Cupressus*
 (c) *Thuja* (d) All of these
30. In which of following flowers borne on leafless branches.
 (a) *Bombax ceiba* (b) *Erythrina indica*
 (c) *Butea monosperma* (d) All of above
31. Trees are reportedly growing on earth for the last million years.
 (a) 10 (b) 100
 (c) 50 (d) 1
32. For checking air pollution foliage should be
 (a) Fine (b) Thick and shining
 (c) Glabrous (d) Pubescent
33. Which of following is suitable for alkaline and saline soils?
 (a) *Casuarina equisetifolia* (b) *Pinus roxburghii*
 (c) *Salix babylonica* (d) *Grevillea robusta*
34. Which of following is suitable for acidic soils?
 (a) *Erythrina indica* (b) *Cassia fistula*
 (c) *Azadirachta indica* (d) *Pinus wallichiana*
35. Which of following *Ficus* species is grown for religious purpose?
 (a) *infectoria* (b) *retusa*
 (c) *religiosa* (d) *benjamina*
36. Which of following is quick growing tree?
 (a) *Eucalyptus hybrida* (b) *Ficus benjamina*
 (c) *Erythrina suberosa* (d) *Parkinsonia aculeata*

37. Which of following *Plumeria* species has red flowers?
(a) *acutifolia* (b) *rubra*
(c) *alba* (d) *obtusa*
38. Which of following species of *Terminalia* has medicinal values?
(a) *catappa* (b) *combretum*
(c) *belerica* (d) *arjuna*
39. Flowers of which are used for making garlands?
(a) *Mimusops elengi* (b) *Polyalthia longifolia*
(c) *Jacaranda mimosaeifolia* (d) *Michelia champa*
40. Places where stray animals pose problem, which of following should be planted?
(a) *Cassia nodosa* (b) *Cassia javanica*
(c) *Cassia marginata* (d) All of above

KEY

EXERCISE

(A) Multiple Choice Questions

1. To distinguish from small trees, the large shrubs has maximum height fixed of m.
(a) 2
(b) 4
(c) 8
(d) 10
2. A low growing woody or semi-woody perennial plant with little or no trunk having height upto 4 m is known as
(a) Climber
(b) Shrub
(c) Tree
(d) Herb
3. Which of the following have highly fragrant flowers?
(a) *Cestrum nocturnum*
(b) *Citrus japonica*
(c) *Daphne odora*
(d) All of above
4. Which of the following has mild odour in flowers and foliage?
(a) *Hamiltonia suaveolens*
(b) *Duranta repens*
(c) *Acalypha hispida*
(d) All of above
5. Which of the following is night blooming?
(a) *Nerium oleander*
(b) *Hamelia patens*
(c) *Nyctanthes arbortristis*
(d) *Acer palmatum*

6. Which of the following have beautiful fruits?
 (a) *Duranta repens* (b) *Solanum pseudocapsicum*
 (c) *Nandina domestica* (d) All of above
7. Which of the following has violet colour foliage?
 (a) *Gynura aurantiaca* (b) *Acalypha hispida*
 (c) *Duranta repens* (d) *Myrtus mediopictus*
8. Which is variegated foliage shrub?
 (a) *Duranta repens* (b) *Hydrangea macrophylla*
 (c) *Ligustrum ovalifolium* (d) All of above
9. Which of the following has coppery foliage?
 (a) *Hamelia patens* (b) *Nerium oleander*
 (c) *Euphorbia cotinifolius* (d) *Euphorbia splendens*
10. Which of the following has excellent autumn colour foliage?
 (a) *Acer palmatum* (b) *Codiaeum variegatum*
 (c) *Kerria japonica* (d) None of above
11. Which flower colour shrubs are grown in night gardens?
 (a) Red (b) Blue
 (c) White (d) Yellow
12. Which of the following has bicolored foliage?
 (a) *Excoecaria* (b) *Nandina*
 (c) *Gynura* (d) All of above
13. Which of the following has beautiful bracts?
 (a) *Bougainvillea* (b) *Mussaenda*
 (c) *Poinsettia* (d) All of above
14. Area of garden devoted exclusively to shrubs is known as
 (a) Border (b) Shrubbery
 (c) Hedge (d) None of above
15. Shrubbery is planted
 (a) Under tree (b) In front of tree
 (c) In south west direction (d) At a raised structure
16. In double faced shrubbery tall shrubs are planted in
 (a) Corner (b) Centre
 (c) Near wall (d) Any of above
17. Shrubs when planted at regular interval to form a thick screen is known as
 (a) Edge (b) Shrubbery
 (c) Hedge (d) All of above
18. For making good hedge any shrub should have
 (a) Dense branching (b) Quick growth
 (c) Tolerant to repeated trimming (d) All of Above
19. Low growing shrubs having same qualities as hedge and planted for the purpose of controlling traffic is known as

- (a) Edge (b) Topiary
(c) Shrubbery (d) None of these
20. For rockeries shrubs should be
- (a) Moisture loving (b) Drought loving
(c) Deciduous (d) Any of above
21. Which of the following is good tall protective hedge?
- (a) *Populus ciliata* (b) *Cuphea milvillea*
(c) *Acacia farnesiana* (d) All of above
22. Which of the following is not good dwarf protective hedge?
- (a) *Agave americana* (b) *Jasminum humile*
(c) *Euphorbia tetragona* (d) All of above
23. Which is planted as tall ornamental hedge?
- (a) *Polyalthia longifolia* (b) *Putranjiva roxburghii*
(c) *Thuja orientalis* (d) All of above
24. Which of following is dwarf ornamental hedge upto 1 m. height?
- (a) *Acalypha hispida* (b) *Clerodendron inerme*
(c) *Euonymus japonicus* (d) All of above
25. Formal edging is made with which one of the following?
- (a) Tiles (b) Bricks
(c) Stones (d) All of above
26. Informal edging is made from
- (a) Stones (b) Plants
(c) Concrete (d) All of above
27. Which of the following is suitable for making edge?
- (a) *Cuphea hyssopifolia* (b) *Cotoneaster sandakphensis*
(c) *Pilea muscosa* (d) All of above
28. Art of training plants into shapes of different statues, birds or animals is known as
- (a) Edge (b) Hedge
(c) Topiary (d) None of above
29. For making topiary plants should be
- (a) Quick growing (b) Dense branching
(c) Small foliage (d) All of above
30. Which of the following is used for making topiary
- (a) *Thuja orientalis* (b) *Cupressus torulosa*
(c) *Clerodendron inerme* (d) All of above
31. Which of following is good for shady areas of home garden
- (a) *Polyscias* (b) *Croton*
(c) *Eranthemum* (d) All of above
32. Which of following is popular pot plant in international market?
- (a) *Ixora* (b) *Poinsettia*
(c) *Crossandra* (d) *Hibiscus*

33. Which of following shrub is grown as indoor flowering pot plant?
 (a) *Euonymus* (b) *Acalypha*
 (c) *Beloperone* (d) None of above
34. Which is grown for cut greens?
 (a) *Breynia nivos* (b) *Bongainvillea*
 (c) *Lantana depressa* (d) *Vinca rosea*
35. Which of following has red flowers?
 (a) *Punica grantum* (b) *Lagerstroemia indica*
 (c) *Acucuba japonica* (d) All of above
36. Which of the following is not a member of family *Euphorbiaceae*?
 (a) *Euphorbia splendens* (b) *Acalypha hispida*
 (c) *Opuntia leptocaulis* (d) None of above
37. Which of following has dark green branches and red flowers?
 (a) *Hibiscus rosasinensis* (b) *Malvabiscus ardoreus*
 (c) *Russelia juncea* (d) All of these
38. Which of following is not a member of *Malvaceae*?
 (a) *Hibiscus syriacus* (b) *Malvabiscus arboreus*
 (c) *Dombeya spectabilis* (d) All of above
39. Which of following is native to India?
 (a) *Russelia juncea* (b) *Hibiscus mutabilis*
 (c) *Cassia glauca* (d) *Hamelia patens*
40. Which of following flower through out the year?
 (a) *Vinca rosea* (b) *Euphorbia pulcherrima*
 (c) *Cassia glauca* (d) All of above
41. Which of following has black fruits
 (a) *Pentas lanceolata* (b) *Ochna jabotapita*
 (c) *Nerium oleander* (d) *Punica granatum*
42. Which of following is suitable for acidic soils?
 (a) *Azalea mollis* (b) *Dombeya spectabilis*
 (c) *Cassia alata* (d) *Excoecaria bicolor*
43. *Hydrangea macrophylla* produces blue flowers in which soil.
 (a) Neutral (b) Acidic
 (c) Alkaline (d) All of above
44. *Hydrangea macrophylla* produces pink/red flowers in soils
 (a) Acidic (b) Neutral
 (c) Alkaline (d) All of above
45. Which is not a cool season flowering shrub?
 (a) *Barleria cristata* (b) *Plumbago rosea*
 (c) *Cassia alata* (d) All of above
46. Which of following has not yellow flowers?
 (a) *Bauhinia tomentosa* (b) *Pentas lanceolata*
 (c) *Ochna squarrosa* (d) *Galphimia gracilis*

47. *Codiaeum variegatum* perform very well at
- (a) Shimla (b) Shillong
(c) Bangalore (d) Ooty
48. *Virburnum cotinifolius* has leaves
- (a) Shining (b) Leathery
(c) Glauous (d) Feather like
49. Botanical name of China shoe flower is
- (a) *Hibiscus mutabilis* (b) *Hibiscus syriacus*
(c) *Hibiscus rosasinensis* (d) *Malvabiscus arboreus*
50. Din ka raja is a local name of
- (a) *Cestrum diurnum* (b) *Cestrum parqui*
(c) *Cestrum nocturnum* (d) None of above

KEY

(A) Multiple Choice Questions

- Which of following is used as climber, shrub or pot plant?
(a) Silver oak
(c) Beloperone
(b) Bougainvillea
(d) Begonia
- Bougainvillea climb by means of
(a) Tendrils
(c) Petiole
(b) Hooks
(d) None of above
- Which of following climb by means of tendrils?
(a) *Jasminum grandiflorum*
(c) *Ipomoea* sp.
(b) *Ficus repens*
(d) *Antigonon leptopus*
- Which of following climb by means of tendrils?
(a) *Antigonon leptopus*
(c) *Bignonia unguisati*
(b) *Pyrostegia venusta*
(d) All of above
- Which of following is not a twinner?
(a) *Quisqualis indica*
(c) *Hiptage madoblota*
(b) *Lonicera japonica*
(d) *Ipomoea purpurea*
- Which of following is a rambler?
(a) *Pyrostegia venusta*
(c) *Quisqualis indica*
(b) *Tecoma grandiflora*
(d) *Jasminum grandiflora*
- Which of following *Tecoma* species is not a climber?
(a) *grandiflora*
(c) *capensis*
(b) *stans*
(d) *jasminoides*
- Which of following species of *Jasminum* is not a climber?
(a) *grandiflorum*
(c) *humile*
(b) *dispermum*
(d) *officinale*
- Which of following has coarse texture foliage?
(a) *Tecoma grandiflora*
(c) *Quisqualis indica*
(b) *Pyrostegia venusta*
(d) *Thunbergia grandiflora*
- Which of following climber is commonly used as hedge?
(a) *Clerodendron splendens*
(c) *Clematis paniculata*
(b) *Clitoria ternata*
(d) *Ipomoea* sp.
- Which of following grow well in shade?
(a) *Trachelospermum jasminoides*
(c) *Tecoma jasminoides*
(b) *Pyrostegia venusta*
(d) *Wisteria sinensis*

12. Which of following is foliage climber?
 (a) *Monstera deliciosa* (b) *Hedera helix*
 (c) *Scindapsus aureus* (d) All of these
13. Which of following has fragrant flowers?
 (a) *Lonicera japonica* (b) *Tecoma grandiflora*
 (c) *Jasminum dispernum* (d) All of above
14. Which of following is not a member of family Bignoniaceae?
 (a) *Pyrostegia venusta* (b) *Tecoma grandiflora*
 (c) *Bignonia unguiscati* (d) *Begonia sempervirens*
15. *Hiptage benghalensis* belongs to family.....
 (a) Hiptageaceae (b) Malipighiaceae
 (c) Saxifragaceae (d) Moraceae
16. Which of following has beautiful fruits?
 (a) *Pyrostegia venusta* (b) *Tecoma jasminoides*
 (c) *Smilax aspera* (d) *Lonicera japonica*
17. Which of following has watch-shaped flower?
 (a) *Passiflora caerulea* (b) *Aristolochia elegans*
 (c) *Ipomoea purpurea* (d) *Petrea volubilis*
18. Which of following has duck-shaped flowers?
 (a) *Aristolochia elegans* (b) *Bignonia unguiscati*
 (c) *Bauhinia vahlii* (d) *Beaumontia grandiflora*
19. Which of following has orange coloured flowers?
 (a) *Jasminum grandiflorum* (b) *Pyrostegia venusta*
 (c) *Bauhinia vahlii* (d) *Beaumontia grandiflora*
20. Which of following does not belong to genus *Jasminum*?
 (a) Italian Jasmine (b) Arabian Jasmine
 (c) Star Jasmine (d) Spanish Jasmine
21. Which of following has white flowers?
 (a) *Clematis paniculata* (b) *Jasminum grandiflorum*
 (c) *Beaumontia grandiflora* (d) All of above
22. Which of following climber is native to India?
 (a) *Beaumontia grandiflora* (b) *Bignonia unguiscati*
 (c) *Clematis paniculata* (d) *Lonicera japonica*
23. Which of following climber has variegated foliage?
 (a) *Ficus repens* (b) *Hedera helix*
 (c) *Porana paniculata* (d) None of above
24. Which of following is most suitable for hilly areas?
 (a) *Vernonia elagnaefolia* (b) *Clerodendron splendens*
 (c) *Wisteria sinensis* (d) *Antigonon leptopus*
25. Which of following is used for screening walls?
 (a) *Pyrostegia venusta* (b) *Lonicera japonica*
 (c) *Ficus repens* (d) All of above

26. Which of following is trained over trellis?
 (a) *Hiptage benghalensis* (b) *Ipomoea cairica*
 (c) *Ficus repens* (d) *Wisteria sinensis*
27. Which of following *Ipomoea* species is known as Railway Creeper?
 (a) *bonanox* (b) *purpurea*
 (c) *tuberosa* (d) *alba*
28. Which of following is/are heavy climber?
 (a) *Bauhinia vahlii* (b) *Wisteria sinensis*
 (c) *Quisqualis indica* (d) All of above
29. Which of following has shining foliage?
 (a) *Tecoma jasminoides* (b) *Thunbergia grandiflora*
 (c) *Lonicera japonica* (d) None of above
30. Which of following does not belong to family Leguminosae?
 (a) *Derris scandens* (b) *Wisteria sinensis*
 (c) *Clematis paniculata* (d) *Comoensia maxima*
31. Which of following is classified as light climber?
 (a) *Solanum wendlandii* (b) *Cobaea scandens*
 (c) *Petrea volubilis* (d) *Thunbergia grandiflora*
32. Which of following is cool season climber?
 (a) *Derris scandens* (b) *Quisqualis indica*
 (c) *Pyrostegia venusta* (d) *Tecoma grandiflora*
33. Which of following is deciduous climber?
 (a) *Ficus repens* (b) *Cissus discolor*
 (c) *Hedera helix* (d) *Bignonia ternata*
34. Which of following has blue flower?
 (a) *Clitoria ternata* (b) *Ipomoea violacea*
 (c) *Wisteria sinensis* (d) All of above
35. Which of following *Bignonia* species is known as cat's claw?
 (a) *purpurea* (b) *graclis*
 (c) *unguiscati* (d) *speciosa*
36. Which of following climber is suitable for pot?
 (a) Golden shower (b) Cat's claw
 (c) Passion flower (d) Bougainvillea
37. Duck flower a climber is native to
 (a) South America (b) Brazil
 (c) India (d) Japan
38. Which of following climb by secreting sticky substance?
 (a) *Clitoria ternata* (b) *Ficus repens*
 (c) *Clematis paniculata* (d) None of above
39. Which of following is suitable for porches?
 (a) *Pyrostegia venusta* (b) *Ipomoea horstalliae*
 (c) *Clerodendron splendens* (d) All of above

40. Which of following *Solanum* species is known as potato creeper?
- (a) *wendlandii*
 - (b) ~~*seafortianum*~~
 - (c) *jasminoides*
 - (d) *tuberosum*
-

1. Which is/ are cultivar/s of Portulaca developed at NBRI Lucknow?
(a) Jhumka (b) Lalita
(c) Ratnam (d) All of above
2. Plants which complete their life cycle with in one year are known as
(a) Annual (b) Biennial
(c) Perennial (d) None of above
3. Rainy season annuals are sown in nursery during
(a) April (b) June
(c) August (d) February
4. Which of following is foliage annual?
(a) Aster (b) Salvia
(c) Kochia (d) Cosmos
5. Which is not grown during summer season?
(a) Kochia (b) Portulaca
(c) Gaillardia (d) Pansy

6. Which of following is intermediate day flowering annual.
 (a) ~~Coleus~~ → *short day* (b) Petunia → *Long short day*
 (c) Salvia → *short day* (d) Cosmos → *short day*
7. Which is not a short day annual?
 (a) ~~Cosmos~~ (b) Carnation → *Antirrhinum Petunia*
 (c) Salvia (d) Amaranthus → *Antirrhinum Petunia*
8. Which of following is long day annual?
 (a) Antirrhinum (b) Rudbeckia
 (c) Petunia (d) All of above
9. Which is a day neutral plant?
 (a) Gomphrena (b) Rudbeckia → *Long day*
 (c) Chrysanthemum → *short day* (d) Campanula → *short long day*
10. Which is the hardiest annual?
 (a) Digitalis → *Hardy* (b) Stock → *semi hardy*
 (c) Antirrhinum → *semi hardy* (d) Aster
11. Which is most tender annual and can not be grown in open in high hills?
 (a) Stock (b) Pansy → *tender*
 (c) Rudbeckia → *Hardy* (d) Statice
12. Seeds of which of following can germinate in dark.
 (a) Echium → *light* (b) Lobelia → *light*
 (c) Nicotiana → *light* (d) None of above
13. Seeds of which require stratification and scarification.
 (a) Sweet pea (b) Nigella
 (c) Cilianthus (d) Marigold
14. Direct seed sowing is not economical in which of following.
 (a) Balsam (b) Sweet pea
 (c) Petunia (d) Hollyhock
15. Seeds of which of following germinate only in dark.
 (a) Zinnia (b) Marigold
 (c) Nigella (d) Aster
16. Plant form in Kochia is
 (a) Informal (b) Columnar
 (c) Globular (d) Conical
17. Which of following is not a primary colour?
 (a) Red (b) Yellow
 (c) Blue (d) Green
18. Which of following is softer or cooler colour?
 (a) Green (b) Orange
 (c) Blue (d) Violet
19. Which of following is basic colour?
 (a) Orange (b) Red
 (c) Grey (d) White

20. Which of following is not a neutral colour?
 (a) White (b) Grey
 (c) Black (d) Pink
21. Closely related colours are also known as colours.
 (a) Contrasting (b) Complimentary
 (c) Analogous (d) None of these
22. Which of following is not a blue colour flowering annual?
 (a) Larkspur (b) Delphinium
 (c) Ageratum (d) Cosmos
23. Yellow is contrasting to colour.
 (a) Orange (b) Black
 (c) Blue (d) Violet
24. Colours which are placed at opposite ends of triangles of colour wheel are known as colours.
 (a) Monochromatic (b) Complimentary
 (c) Analogous (d) None of above
25. Which of following is a systemic fungicide?
 (a) Bavistin (b) Captan
 (c) Dithane-M. 45 (d) Thiram
26. High dose of nitrogen causes premature flowering more readily in
 (a) Marigold (b) Lupine, *sunflower, nicotiana*
 (c) Cosmos (d) Viola
27. Deficient nitrogen cause premature flowering in
 (a) Clarkia (b) Candytuft
 (c) Salvia (d) All of these
28. Which of following is most suitable for hanging baskets?
 (a) Portulaca (b) Cosmos
 (c) Rudbeckia (d) Aster
29. Which annual can be grown more successfully in shade?
 (a) Pansy (b) Stock
 (c) Cineraria (d) Daisy
30. Which of following is not a good loose flower?
 (a) Marigold (b) Gaillardia
 (c) Zinnia (d) Sweet pea
31. Which is not grown as foliage annual?
 (a) Kochia (b) Coleus
 (c) Celosia (d) Ageratum
32. Monogenic recessive male sterility is common in
 (a) Marigold (b) Zinnia, *salvia*
 (d) All of above

33. Heterostily is a common feature in
- (a) Petunia (b) Primula
(c) Gerbera (d) Ageratum
34. Cytoplasmic male sterility is found in
- (a) Antirrhinum (b) Petunia → sunflower
(c) Salvia (d) Ageratum
35. Which of following is not self-pollinated flowering annual.
- (a) Lupine (b) Sweet pea
(c) Saponaria (d) Larkspur → often cross pollinated
36. Which is not cross-pollinated annual?
- (a) Kochia (b) Cosmos
(c) Cilanthis → self pollinated (d) Rudbeckia
37. Which of following is not often cross-pollinated annual?
- (a) Antirrhinum (b) Linaria
(c) Pansy (d) Ageratum →
38. Isolation distance for maintaining pure seed of often cross-pollinated annual is
- (a) 5 (b) 25-30
(c) 50-100 (d) 400-600
39. The mechanism which promotes self-pollination is
- (a) Chasmogamy (b) Dichogamy
(c) Dicliny (d) Heterostily
40. When cross-pollination took place through wind is known as
- (a) Anemophily (b) Hydrophily
(c) Entomophily (d) All of above
41. Open pollinated formulae mixtures are very popular in
- (a) Biennials (b) Annuals
(c) Perennials (d) All of above
42. F-2 seeds are common in
- (a) Balsam (b) Antirrhinum
(c) Petunia (d) All of above
43. Hybrid seed production at lowest cost can be done by using
- (a) Self-incompatibility (b) Pollen sterility
(c) Triploidy (d) Somatic embryogenesis
44. Nugget is a hybrid cultivar of
- (a) Zinnia (b) Marigold
(c) Antirrhinum (d) Petunia
45. Which of following country is not commercially producing hybrid seed in annuals to export?
- (a) the Netherlands (b) Iran
(c) USA (d) India

46. Who has given the classical theory of Hybrid vigour in 1911?
(a) ~~Shull~~ (b) Robinson
(c) Allard (d) None of above
47. First F_1 hybrid in Begonia was released by Benery Seed Co. in Germany during.
(a) 1911 (b) ~~1909~~
(c) 1945 (d) 1965
48. First F_1 hybrid in petunia was developed in Japan during
(a) 1965 (b) ~~1945~~
(c) 1935 (d) 1970
49. Marigold has originated in
(a) USA (b) ~~Mexico~~
(c) West Indies (d) South Africa
50. Which of following has not originated in India?
(a) Gomphrena (b) Lady's lace
(c) ~~Zinnia~~ (d) Balsam

B. Fill in the

1. *Annuals* complete their life cycle in one season or a year.
2. *Loam* is most ideal soil for growing annuals.
3. Rainy season annuals are sown during *June*.
4. Petunia has over *1000 seeds* per gram.
5. *Gambusia* is day neutral annual.
6. *Crocus* is long day annual.
7. *Agrostis* is hardy annual.
8. *Chlorox* is used commonly to disinfect nursery beds.
9. In herbaceous border annuals to be grown must *synchronise* in flowering.
10. *Red* and green are contrasting colours.
11. Drooping and compact growing annuals are good for growing in *border*.
12. *Impatiens* is good for growing in shade.
13. *Verbena* is a foliage annual.
14. *Quercus* is an annual climber.
15. *Water* is good for air drying.

Fills in the Blanks

- | | | |
|----------------|---------------------|------------------|
| 1. Annuals | 2. Sandy-loam | 3. May-June |
| 4. 10000 | 5. Gompherina | 6. Antirrhinum |
| 7. Digitalis | 8. Formalin | 9. Synchronize |
| 10. Red | 11. Hanging baskets | 12. Salvia |
| 13. Amaranthus | 14. Sweet pea | 15. Paper flower |

EXERCISES

A. Multiple Choice Questions

1. Gladiolus is propagated by
 (a) Corm
(c) Rhizome
(b) Bulb
(d) Tuber
2. Bulbil is a common feature in
 (a) Tiger lily
(c) Dahlia
(b) Tulip
(d) Day lily

3. Cormel is a swollen end of
 (a) Primary root (b) Fibrous root
 (c) Stolon (d) Axillary bud
4. Shobha is a mutant cultivar of developed at IHR, Bangalore.
 (a) Tulip (b) Narcissus
 (c) Hibiscus (d) Gladiolus
5. Dahlia is propagated by
 (a) Tuber (b) Tuberos root
 (c) Rhizome (d) Root
6. Swami Vinayananda of R. K. Math has done pioneer work in
 (a) Dahlia (b) Gladiolus
 (c) Rose (d) Marigold
7. Dahlia was first introduced by Agri-Horticultural Society of India at Calcutta in
 (a) 1935 (b) 1857
 (c) 1982 (d) 1905
8. The late cutting method of dahlia propagation was developed in at Calcutta.
 (a) 1935 (b) 1857
 (c) 1960 (d) 1981
9. Non-tunicate bulbs are common in
 (a) Tulip (b) Narcissus
 (c) Nerine (d) Liliium
10. Scooping is very common practice of propagation in
 (a) Hyacinth (b) Rose
 (c) Liliium (d) Crocus
11. Among bulbous plants maximum area is under which flower
 (a) Tulip (b) Gladiolus
 (c) Liliium (d) Crocus
12. Which country is largest exporter of bulbous flowers?
 (a) Netherlands (b) Israel
 (c) USA (d) Spain
13. Demand of bulbous flowers is in
 (a) USA (b) UK
 (c) Canada (d) None of above
14. Most of bulbous flowers are native to
 (a) South Africa (b) Mediterranean
 (c) USA (d) All of above
15. In which ornamental bulbous plants flowering is followed by vegetative growth.
 (a) Football lily (b) Gladiolus
 (c) Tulip (d) None of above
16. Aerial bulblets formed in the axil of leaves are known as
 (a) Aerial bulb (b) Bulbils
 (c) Cormlets (d) None of these

17. Scoring is very common in which of bulbous plant.
 (a) Gladiolus (b) Tulip
 (c) Liliium (d) Begonia
18. Which is not propagated by tubers?
 (a) Anemone (b) Caladium
 (c) Gloriosa (d) Iris
19. Which is not propagated by rhizome?
 (a) Liliium (b) Hydeckhium
 (c) Canna (d) Iris
20. Spring flowering bulbous plants are planted during
 (a) August (b) January
 (c) November (d) March
21. Which of following is planted at maximum depth?
 (a) Gladiolus (b) Liliium
 (c) Tulip (d) Tuberose
22. Which is a spring flowering bulbous plant?
 (a) Allium (b) Cobaea
 (c) Lycoris (d) Clivia
23. Which is most sensitive to temperature?
 (a) Clivia (b) Gladiolus
 (c) Crocus (d) Tulip
24. Which of following cultivar of gladiolus is not developed at IARI?
 (a) Manhar (b) Dhanvantri
 (c) Mayur (d) Suchitra
25. Which of following cultivar of gladiolus is resistant to Fusarium wilt?
 (a) Sagar (b) Sapna
 (c) Dhiraj (d) Apsara
26. Which of following is not a cultivar of Tuberose?
 (a) Shringar (b) Suvashini
 (c) Rajat Rekha (d) Swarna
27. National flower of Netherlands is
 (a) Tiger lily (b) Tulip
 (c) Daffodil (d) Crocus
28. Lily is national flower of
 (a) Italy (b) Iraq
 (c) Turkey (d) South Africa
29. Which of following is a symbol of self-esteem?
 (a) Narcissus (b) Stock
 (c) Irish (d) Carnation
30. Which is a symbol of purity?
 (a) Tulip (b) Tuberose
 (c) Lily (d) Daffodil

31. Bulbils are not formed in which species of *Lilium*?
- (a) *tigrinum* (b) *bulbiferum*
 (c) *longiflorum* (d) *wallichianum*
32. Diploid chromosome no. of gladiolus is
- (a) 20 (b) 30
 (c) 60 (d) 12
33. Which of following is the major inhibitor in controlling germination of corms and cormels in gladiolus?
- (a) ABA (b) Auxins
 (c) TIBA (d) Cycocel
34. Fluorine injury is very common in
- (a) Gladiolus (b) Rose
 (c) Iris (d) Tulip
35. Negative geotropism a disorder in gladiolus occur during
- (a) Harvesting (b) Packing
 (c) Transporting (d) Selling
36. Which of following fungus is not common in gladiolus cultivation?
- (a) Fusarium (b) Botrytis
 (c) Curvularia (d) Rhizoctonia
37. Storage corm rot in gladiolus is caused by
- (a) Fusarium (b) Rhizoctonia
 (c) Penicillium (d) All of the above
38. First hybrid in gladiolus was developed in 1841.
- (a) *G x gandavensis* (b) *G. x psittacinus*
 (c) *G. oppositiflorus* (d) None of above
39. *Omithogalum thyrsoides* is a plant?
- (a) Annual (b) Shrub
 (c) Bulbous (d) Foliage
40. Lt. Governor of Himachal Pradesh Shri Bajrang Bahadur Singh Bhadari has developed 160 cultivars of
- (a) Rose (b) Gladiolus
 (c) Dahlia (d) Chrysanthemum
41. In which group of plants warm-cool-warm thermo-periodic cycle is most common?
- (a) Annuls (b) Woody
 (c) Bulbous (d) Ferns
42. In forcing bulbs, which of the following are included?
- (a) production
 (b) Production-Programming-Production-Marketing
 (c) Programming-Production-Marketing
 (d) None of above
43. Tulip bulbs should be given cold treatment at which stage?
- (a) P₁ (b) G
 (c) L (d) None of above

44. For expecting normal growth in following season most of bulbs should be stored at..... °C
 (a) 9-10 (b) 10-12
~~(c) 18-20~~ (d) 0-5
45. Crocus bulbs are stored at °C
 (a) 5 ~~(b) 10-12~~
 (c) 18-20 (d) 0-5
46. Flower initiation in most of bulbs start when
~~(a) Still growing in field~~ (b) At harvest
 (c) In storage (d) After planting in filed
47. For getting early flowering in forcing process bulbs are stored for a week at°C
 (a) 10-15 (b) 15-18
 (c) 0-2 ~~(d) 30-35~~
48. Which of following country is leading explorer of programmed bulbs?
~~(a) the Netherlands~~ (b) Israel
 (c) Colombia (d) Japan
49. Breaking virus first of all was reported in
 (a) Rose ~~(b) Tulip~~
 (c) Lily (d) Gladiolus
50. Tulip breaking virus is transmitted by
 (a) Thrips (b) Mites
~~(c) Aphids~~ (c) Mechanical means
51. Tulip virus breaking affected bulbs in Holland were sold upto US\$ per bulb.
 (a) 10 (b) 400
~~(c) 1600~~ (d) 100
52. For production of disease free planting material which of following is practiced.
 (a) Heat therapy (b) Chemotherapy
 (c) Meristem culture ~~(d) All of above~~
53. Which of following is dicotyledonous bulb plant?
 (a) Allium (b) Tulip
 (c) Amaryllis ~~(d) Oxalis~~
54. Which of following is not propagated by corm?
 (a) Acidanthera (b) Ixia
 (c) Freesia ~~(d) Scilla~~
55. Which of following is propagated through hypocotyl (Tuberous stem)?
 (a) Begonia (b) Cyclamen
 (c) Gloxinia ~~(d) All of above~~
56. Which is not native to India?
 (a) Crinum (b) Gloriosa
~~(c) Colchicum~~ (d) Begonia

57. Which of following belongs to family *Asteraceae*?
 (a) Begonia (b) Dahlia
 (c) Tuberose (d) Ceropegia
58. Bulbs of which of following are not evergreen?
 (a) Clivia (b) Kniphofia
 (c) Freesia (d) Dietes
59. Which is not a deciduous bulbous plant?
 (a) Crocus (b) Tulip
 (c) Pillansia (d) Watsonia
60. Which of the following is highly fragrant bulbous cut flower?
 (a) Freesia (b) Dahlia
 (c) Crocus (d) Iris

B. Fill in the Blanks

- is the largest exporter of bulbs.
- Total area in the world under bulbous plants is about.....ha.
- Total area in India under bulbous plants is about.....ha.
- is the leading bulbous flower in India.
- Maximum trade in bulbous plants is done inflower.
- Himachal Pradesh is very suitable for growingflowers.
- is a process designed to kill the flower bud within tulip bulbs to obtain higher bulb yield in next season.
- The basic objective of bulbis to get quality cut flowers or pot plants.
- Pre-cooling of tulip bulbs is done at 7-9°C for aboutweeks.
- Incas lily belongs to family.....

KEY

A. Multiple Choice Questions

- | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (a) | 2. (a) | 3. (c) | 4. (d) | 5. (b) | 6. (a) | 7. (b) | 8. (c) |
| 9. (d) | 10. (a) | 11. (b) | 12. (a) | 13. (a) | 14. (d) | 15. (a) | 16. (b) |
| 17. (a) | 18. (d) | 19. (a) | 20. (c) | 21. (b) | 22. (a) | 23. (d) | 24. (a) |
| 25. (c) | 26. (d) | 27. (b) | 28. (a) | 29. (a) | 30. (c) | 31. (c) | 32. (b) |
| 33. (a) | 34. (a) | 35. (c) | 36. (d) | 37. (d) | 38. (a) | 39. (c) | 40. (b) |
| 41. (c) | 42. (b) | 43. (b) | 44. (c) | 45. (b) | 46. (a) | 47. (d) | 48. (a) |
| 49. (b) | 50. (c) | 51. (c) | 52. (d) | 53. (d) | 54. (d) | 55. (d) | 56. (c) |
| 57. (b) | 58. (c) | 59. (c) | 60. (a) | | | | |

B. Fills in the Blanks

- | | | |
|-----------------------------|--------------|------------|
| 1. the Netherlands | 2. 50,000 ha | 3. 3500 ha |
| 4. Gladiolus | 5. Tulip | 6. Bulbous |
| 7. Blind stoken | 8. Forcing | 9. Six |
| 10. <i>Alstroemeriaceae</i> | | |

A. Multiple Choice Questions

1. Ground cover of perennial grass which persists under continuous mowing is called as
(a) Turf (b) Paving
(c) Lawn (d) All of above
2. Which of following site is appropriate for lawn in the home garden?
(a) South (b) South-east
(c) South-west (d) All of above
3. Perfect grading for proper drainage is
(a) 1m slope in 100 m (b) 1" slope in 50'
(c) 15 cm slope in 20 m (d) None of above
4. Most appropriate method of preparing lawn is by
(a) Seed (b) Plastering
(c) Dibbling (d) Sprinkling
5. In one mowing how much grass showed is cut?
(a) 1/2 (b) 1/4
(c) 2/3 (d) 1/3
6. Rolling of lawn is done to
(a) Touch nodes with ground (b) Break grass
(c) Leveling of ground (d) All of above
7. Which of following is effective herbicide in Zoysia Grass?
(a) 2,4-D (b) Sylvex
(c) Glyphosate (d) All of above
8. Fairy ring spot of lawn is due to
(a) Fungus (b) Nutrient deficiency
(c) Bacteria (d) Insect
9. Which of the following lawn grass has coarse texture?
(a) St. Augustine (b) Zoysia
(c) Cynodon (d) Agrostis
10. Which is highly shade tolerant?
(a) Bermuda (b) Kentucky blue
(c) Carpet (d) Red fescue

11. Which is highly drought resistant?

- (a) Tall fescue
- (c) Centipede

- (b) Rough blue
- (d) Carpet

12. Which is highly cold tolerant.

- (a) Rough blue
- (c) Creeping bent

- (b) Zoysia
- (d) All of these

13. Which is least heat tolerant?

- (a) Rough blue
- (c) Bahia

- (b) Carpet
- (d) Zoysia

14. Which is highly salinity tolerant?

- (a) Creeping bent
- (c) Rough blue

- (b) Red top
- (d) Carpet

15. Which is maximum bear tolerant?

- (a) Centipede
- (c) Carpet

- (b) Creeping bent
- (d) Tall fescue

16. Which of following has sod forming through rhizomes?

- (a) St. Augustine
- (c) Rough blue

- (b) Creeping bent
- (d) All of above

17. Which of following has fine texture?

- (a) Creeping bent
- (c) Centipede

- (b) Red top
- (d) Bahia

18. Which has medium texture?

- (a) Red top
- (c) Centipede

- (b) Perennial rye
- (d) All of above

19. Which of following has fastest establishing rate?

- (a) Bermuda
- (c) Colonial bent

- (b) Kentucky blue
- (d) Manilla grass

20. Which of following has medium establishment rate?

- (a) Creeping bent
- (c) Bahia

- (b) Red fescue
- (d) All of these

B. Fill in the Blanks

1. Lawn mower is invented by
2. Prototype of lawn during 13th century are available from
3. grass does not require mowing.
4. is very good lawn grass for hills.
5. aspect of the building is good for making lawn in home garden.
6. seeds are sown for making quick artificial lawn.
7. is very good herbicide for weed control in Zoysia grass.
8. Lawn should be irrigated up to cm depth.

B. Fills In the Blanks

1. Edwin Budding

4. Agrostis

7. Benefin

2. Egypt/China

5. South-east/west

8. 15

3. Zoysia

6. Wheat/Barley

EXERCISE

A. Multiple Choice Questions

1. Which of the following water garden plant was most common in Buddhist temples?
(a) Lotus (b) Nymphaea
(c) Victoria (d) Eurale
2. In which garden Lord Budha saw the lotus?
(a) Parmodyan (b) Udyan
(c) Nandanvana (d) Vrikshavatica
3. Which of the following is associated with lotus?
(a) Vishnu (b) Brahma
(c) Luxmi (d) All of these
4. Which of the following is a lily pool?
(a) Kaccha pool (b) Concrete pool
(c) Fibre glass pool (d) All of these
5. Which of the following is most serious weed in lily pools?
(a) Blanket weed (b) Water hyacinth
(c) Water cress (d) Alocacia
6. Which of the following is not a surface flowering aquatics?
(a) Eurale (b) Lotus
(c) Elodea (d) Nymphaea
7. Which of the following is most common oxygenators?
(a) Elodea (b) Crow foot
(c) Victoria (d) Typha
8. Which of the following is not a floating plant in water gardens?
(a) Azolla (b) Lemna
(c) Trapa (d) Tape grass
9. Which of the following is not a marginal plant in water gardens?
(a) Acorus (b) Victoria
(c) Calla (d) Typha
10. The flower head of which of the following is used in dry flower arrangements?
(a) Typha (b) Calla
(c) Lotus (d) Acorus

KEY

Multiple Choice Questions

1. (a) 2. (c) 3. (d) 4. (d) 5. (a) 6. (c) 7. (a) 8. (d)
9. (b) 10. (a)

EXERCISE

A. Multiple Choice Questions

1. Where is the Head Quarter of PPV&FR Authority in India situated?
 (a) New Delhi
(c) Mumbai
(b) Kolkata
(d) Bangalore
2. Who is the founder chairperson of PPV&FR Authority in India?
(a) Dr VL Chopra
 (a) Dr S Nagarajan
(b) Dr RB Singh
(d) Dr Vishnu Swarup

3. Which of following ornamental crop has been included for DUS testing under PPV&FR in India?
 - (a) Gladiolus
 - (b) Marigold
 - (c) Jasmine
 - (d) Rose
4. How many ornamental crops have been included for DUS testing under PPV&FR in India?
 - (a) 3
 - (b) 5
 - (c) 9
 - (d) 11
5. Where is the Head Quarter of UPOV situated?
 - (a) Parris
 - (b) Washington
 - (c) Geneva
 - (d) Mexico
6. Where is the Head Quarter of CIOPORA situated?
 - (a) Moscow
 - (b) Geneva
 - (c) London
 - (d) Angers
7. Where is the Head Quarter of CPVO situated?
 - (a) Angers
 - (b) Brussels
 - (c) New Delhi
 - (d) Tokyo
8. Where is the Head Quarter of NRDC situated?
 - (a) Mumbai
 - (b) New Delhi
 - (c) Dhaka
 - (d) Katmandu
9. How many countries are signatory to UPOV?
 - (a) 25
 - (b) 50
 - (c) 68
 - (d) 88
10. Which of the following country is not the signatory to UPOV?
 - (a) USA
 - (b) UK
 - (c) China
 - (d) India
11. How many ornamental crops have been included for DUS testing by UPOV?
 - (a) 54
 - (b) 70
 - (c) 90
 - (d) 114
12. Which of the following institute has patented gladiolus cultivars in USA?
 - (a) IARI New Delhi
 - (b) IHBT Palampur
 - (c) NBRI Lucknow
 - (d) IIHR Bangalore
13. Which of the following institute has patented chrysanthemum cultivars in USA?
 - (a) IARI New Delhi
 - (b) IHBT Palampur
 - (c) NBRI Lucknow
 - (d) IIHR Bangalore
14. Which of the following company has patented Aglaonema cultivars in USA?
 - (a) Pocha seeds company Kolkata
 - (b) Indo American Hybrid Seeds Company Bangalore
 - (c) Namdhari Seeds Company Amritsar
 - (d) NSG's Farms and Nursery Bangalore

15. Who is not the member of Task Force of PPV of Ornamentals in India?
 (a) Vishnu Swarup
 (c) KV Parsad
 (b) OP Sehgal
 (d) NK Dadlani
16. For how many years protection is given to a variety of ornamental crops under PPV&FR in India?
 (a) 5
 (b) 8
 (c) 15
 (d) 20
17. Which of the following bougainvillea variety from IIHR Bangalore has been patented in Australia?
 (a) Dr HB Singh
 (c) RR Pal
 (b) Indira
 (d) Dr Rao
18. How much fee has been proposed by PPV&FR Authority for registration of a non commercial variety per annum?
 (a) ₹ 1000
 (c) ₹ 5000
 (b) ₹ 2000
 (d) Nil
19. How much fee has been proposed by PPV&FR Authority for registration of a hybrid variety per annum based on total sale value?
 (a) 1%
 (c) 0.1%
 (b) 5%
 (d) 0.6%
20. Which centre has not been identified for testing of rose cultivars under DUS in India?
 (a) CPRI Shimla
 (c) NBRI Lucknow
 (b) IARI New Delhi
 (d) IIHR Bangalore

KEY