

Model Answer

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SEMESTER END THEORY EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	:	VI	Term	:	II	Academic Year	:	2020-21
Course No.	:	ELE HORT-367	Title	:	Landscaping			
Credits	:	(2+1)						
Day & Date	:	17/6/2021	Time	:	2.00 Hr	Total Marks	:	80

Note : 1) Solve ANY EIGHT questions from SECTION-A
 2) Solve ANY TWELVE questions from SECTION-B
 3) ALL questions from SECTION-C are compulsory
 4) Send the PDF file of answer sheet to the email id of respective course teacher

SECTION-A

(Write the answers in 4-5 sentences only. Each question carries 4 marks)

Q. 1	Describe in brief the importance of landscaping. <ol style="list-style-type: none"> 1. The art of landscape gardening will involve considering the total environment of any new development and then shaping it using natural elements such as landform, trees, shrubs and water for a pleasing harmony. 2. This can make a constructive contribution to the improvement rather than the destruction of environment. 3. Plants that form an important element in landscape design aid in reducing the pollution of environment and minimizing some of the effect of heat, sound, wind air, etc. 4. Plants absorb CO₂ and release O₂ during photosynthetic process and purify the air. 5. Plants with thick foliage also trap pollutants, which are later on washed away by rains. 6. Some plants like mustard, hyacinth absorb toxic material from the environment. 7. Plant control erosion caused due to excessive wind and rain. 8. Plant reduce the radiated heat thereby bringing down temperature. 9. Plants have aesthetic value and also gives pleasure. 10. Nursery industry: Production and distribution of woody and herbaceous plants and also includes ornamental, bulbous crops and cuttings is profitable business. 11. Gardens are essential for public recreation and education. A children's park is useful for the children to play in the open air.
Q. 2	Enlist the different principles of landscaping and describe axis and focal point Principles : 1. Initial approach 2. Object fulfillment 3. Tentative plan 4. Axis 5. Focal Point 6. Mass effect 7. Unity 8. Space 9. Divisional lines 10. Proportion and scale 11. Texture 12. Time and light 13. Tone and colour 1. Axis This is an imaginary line in any garden around which garden is created striking a balance. In a formal garden, the central line is the axis. At the end of an axis generally there will be a focal point, although another architectural features such as bath, fish pond etc, can also be created at or about the midpoint. 2. Focal Point : In every garden there is a center of attraction which is generally an architectural feature focused as a point of interest. A focal point is one of the elements of good landscaping design.
Q. 3	Give the different styles of garden and explain in brief the formal style.

	<p>Styles of garden : Formal, Informal, free style and wild style</p> <p>Features of formal design are:</p> <ul style="list-style-type: none">• The design is stiff as everything is done in a straight and narrow way.• If there is a plant on the left hand side of a straight road, a similar plant must be planted at the opposite place on the right hand side i.e., mirror image of each other.• The plan is symmetrical with square, rectangular and <u>roads</u> cut at right angles.• It has a sort of enclosure or boundary.• Flower beds are arranged in geometric designs.• The arrangement of <u>trees</u> and <u>shrubs</u> is necessarily geometrical and kept in shape by trimming and training.• Other features like fountains, water pools, cascades etc. are used for further attraction <p>Demerits</p> <ul style="list-style-type: none">• Formal gardens have no ‘secrets’ and the element of <u>surprise</u> is lost.• However, attractive focal points at terminal and intersecting points of paths and <u>roads</u> are provided to make the formal garden effective.• Present day home gardens are laid out in formal design only at the frontage.																					
Q. 4	<p>Give the different steps of lawn development. Describe the planting of lawn This work can be suitably done by following the steps given as under. a) Planning b) Preparation c) Planting d) Maintenance</p> <p>Planting of lawn</p> <p>The most commonly used grass for preparing lawn is doob grass (<i>Cynadondactylon</i>). It is also called hariali. This thrives under hot sunny site. The grass is suitable for large areas and play ground. Other grasses are China grass, Korean grass, Maxican grass, Selection -2 , Diamond grass, etc.</p> <p>GrownFull shade : Ryegrass, Grown in some shade : Zoysiagrass and St. Augustinegrass.</p> <p>The total ground of a lawn should be divided into suitable section. Each section should be lightly irrigated and marked at specific distances and sa=mall openings should be done where the grasses are to be planted.</p> <p>The selected lawn grass be planted either by seeds or by root suckers. The planting material should be well trimmed off to extra long leaves and roots and treated with suitable fungicide before planting. The light irrigation or watering with sprinkler should be given after complete planting of a piece.</p>																					
Q. 5	<p>Enlist the different garden components and describe in short hedge</p> <table><tr><td>1. Garden wall</td><td>9. Carpet bedding</td><td>17. Hanging gardens</td></tr><tr><td>2. Fencing</td><td>10. Flower beds</td><td>18. Marshy gardens</td></tr><tr><td>3. Steps</td><td>11. Shrubbery</td><td>19. Green house</td></tr><tr><td>4. Drives and paths</td><td>12. Borders</td><td>20. Conservatory</td></tr><tr><td>5. Edges</td><td>13. Rockery</td><td>21. Dry wall</td></tr><tr><td>6. Hedges</td><td>14. Lawn</td><td>22. Sunken garden</td></tr><tr><td>7. Arches</td><td>15. Water ponds</td><td>23. Shade garden</td></tr></table> <p>Hedge : The hedge can be defined as planting of shrubs at regular intervals to form a continuous screen. The main objects of hedges are: a) To serve as a compound wall b) To provide shelter from wind c) Provide privacy d) Help in separating one component of garden (vegetable garden, flower garden) e) Help in screening odd spots like manure pits, lavatory, servant quarters, etc.</p> <p>Criteria for selecting hedge plant a) it should be self protective b) It should be quick growing c) Hardy d) Easy to propagate e) Dense f) Should respond to frequent pruning g) Ling living h) Attractive</p> <p>Hedge plants are planted closely (either by cuttings or seeds) in a trench. These need to be manured regularly. Before the commencement of rainy season, 4 kg FYM per running meter should be</p>	1. Garden wall	9. Carpet bedding	17. Hanging gardens	2. Fencing	10. Flower beds	18. Marshy gardens	3. Steps	11. Shrubbery	19. Green house	4. Drives and paths	12. Borders	20. Conservatory	5. Edges	13. Rockery	21. Dry wall	6. Hedges	14. Lawn	22. Sunken garden	7. Arches	15. Water ponds	23. Shade garden
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	<p>applied. Fertilizers should be applied at 30 g each of SSP, bone meal and ammonium sulphate per meter length twice early.</p> <p>Some of trees and shrubs recommended for hedges are : Acacia, Erythrina, Thevetianerifolia, Casurinaequistifolia, Acalypha, Clerodendroninorme, Golden duranta, Hibiscus, Thuja, Tecomastans, Bougainvillia, etc.</p>
Q. 6	<p>Give the significance of trees in landscaping</p> <p>Significance of trees in landscaping</p> <ul style="list-style-type: none"> • Trees form the main framework of the garden. • Some trees produce attractive and beautiful flowers including fragrant flowers • Some trees are noted for their attractive foliage • Some trees are known for their peculiar shape or form which is used as specimen trees. • Some trees are known for their peculiar shape or form which is used as specimen trees.
Q. 7	<p>Enlist garden adornments and describe in brief the garden seats.</p> <p>1) Garden seats 2) Ornamental Tubs, Urns and vases 3) Bird Baths 4) Sundials 5) Floral clocks 6) Japanese Lanterns 7) Ornamental stones 8) Fountains 9) Statues 10) Plant stand</p> <p>Garden seats : The seats should be comfortable. The garden seats are essential in public parks where old and young people go for a walk. The seats in such places should be made of concrete. Wooden or plastic seats are likely to be broken by visitors.</p>
Q. 8	<p>Define shrubs and give the uses of shrubs in landscaping.</p> <p>Shrubs are defined as woody or semi woody perennial plants, the branches of which arise from the base of the plant and grow up to a height ranging from 50 cm to 4 m. Hibiscus, Ixora, Tecomastans.</p> <p>Uses</p> <ol style="list-style-type: none"> a) They are important garden plants not only because of the large number of cultivated species and varieties but also due to the wide range of variation in the shape and size of the plants b) They fit very well to home gardens in cities and towns. c) Shrubs act as a foundation plant in the buildings. d) Flowering can be seen throughout the year from one or other plant. e) They can be used as a hedge, fencing and also for topiary e.g. Hibiscus, Thevetia, Casuarina f) They can also be grown as potted plants.
Q. 9	<p>Define bonsai and give different styles of bonsai</p> <p>Bonsai styles</p> <p>The following are the principal classical bonsai styles.</p> <ol style="list-style-type: none"> 1. Formal upright style (Chokkan) 2. Winding or Kyokkum/Curved trunk style (Moyogi) 3. Oblique/Leaning trunk style (Shakakn) 4. Windswept style (Fukinagashi) 5. Broom style (Hokidachi) 6. Cascade style (Kengai) 7. Multiple trunks style or Clump shaped (Kadudaki) 8. Raft style (Ikuabuchi) 9. Woodland (Yoseue) 10. Twisted trunk style: 11. On the rock 12. Memo bonsai/Mini bonsai/Disc bonsai
Q. 10	<p>Describe in brief the general recommendations for landscape design of educational institutions.</p> <p>General recommendations</p> <ol style="list-style-type: none"> 1. Planting large trees along the school compound and the rear and wings will help to bring down noise and cut down dust and storms. This plantation will also help to keep down severe heat

	<p>and cold.</p> <ol style="list-style-type: none"> The front should be planted with medium-sized flowering trees for beauty. The trees should not completely obstruct the view of the building from outside. For enhancing the scenic beauty, a row of flowering trees with different blooming seasons may be planted in front of the large trees along the periphery. It is difficult to give any general recommendation regarding the types of trees, as this will vary according to the architectural design, situation and climate. The object is to provide beauty and comfort depending on convenience. The roads and paths are to be formally planted with medium to tall flowering plants. Before planting, provision should be made for overhead wiring and sewerage so that these do not interfere with the avenue planting. Where the electric wires limit the choice of avenue trees, small flowering trees such as <i>Cochlospermumgossypium</i>, <i>Callistemon lanceolatus</i>, <i>Bauhinia variegata</i>, and <i>Tecomaargentea</i> can be planted. A lawn looks good in an educational institution, but is very difficult to maintain. The playground can be planted with lawn, if this can be maintained or should be left bare. A thickly planted belt of eucalyptus for peripheral planting is considered ideal. Silver oak, <i>Polyalthia</i> and <i>Samaneasaman</i> are also suitable for this purpose. <i>Cassia fistula</i>, <i>Tecomaargentea</i>, <i>Erythrinaindica</i>, <i>Lagerstroemia flos-reginae</i> and <i>Bauhinia variegata</i> are suitable for planting in the front and in the front row of the border planting. The roads and paths are to be formally planted with medium to tall flowering plants. Shrubs play an important part in the school landscaping. Shrub borders can replace hedges in parks or playgrounds since they are very effective and also the maintenance is minimum. Climbers such as <i>Bignonia venusta</i> supported against a wall would look beautiful. Creepers climbing with their rootlets such as <i>Ficusrepens</i>, <i>Tecomaradicans</i> can also be trained over stone or brick walls. Besides an ornamental or a landscape garden, universities and colleges can also maintain a botanical garden or a student garden, where the plants are arranged in groups, family wise so that such gardens become educative.
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SECTION-B

(Write the answers in one sentence only. Each question carries 2 marks)

Q. 11	Define the following terms
	a) Landscaping: The process of making a garden or other piece of land more attractive by altering the existing design, adding ornamental features and planting trees and shrubs.
	b) Vertical Garden is a special kind of urban gardening suitable to small spaces, particularly for decorating the walls and roofs in various styles.
	c) Edging: Lining of borders of flower beds, paths, lawns with brick or concrete low (10-15 cm) wall or living plants is called edging.
	d) Pergola: a pergola may be defined as a series of arches joined together.
	e) Carpet bedding: Carpet bedding means covering an area, preferably a bed or series of beds, with low growing herbaceous plants according to a set design.
	f) Annuals : are plants that complete their life cycle in one season or one year
	g) Ferns : are foliage plants distinguished from almost all other plants in that they do not produce flowers and seeds but reproduce by means of spores.
	h) Cacti and succulents :are a group of plants which have special structures to store water in thick fleshy leaves or stems.
	i) Lawn : A green carpet on the ground is called lawn.
	j) Topiary: Plants trained to different shape i.e. birds, animals, domes, etc. is called topiary.
	k) Arboretum : The garden is a museum of living plants where propagation of various plants is undertaken and plants are grown for scientific study,
	l) Garden drives: a drive in a garden refers to a road which leads to the house, office or garage
	m) Turf :A piece of earth about 5 cm thick and having thick grass growing on it is called turf.
	n) Bioaesthetic planning can be defined as a conscious plan of the Flora (Plants) and Fauna

	(Animals) with the objective of beautifying the country.			
SECTION-C				
(Choose the correct option. Each question carry 1 mark)				
Q. 12	1)Non flowering plants are generally known as			
	a)	Shrub	b)	Tree
	c)	Foliage Plant	d)	Creeper
	2)Mughal garden comes under which style			
	a)	Formal	b)	Informal
	c)	Free style	d)	All of these
	3) Running water is the feature of ----- garden			
	a)	Japanese	b)	Mughal
	c)	English	d)	None of these
	4) When shrubs are planted on the boundary for fencing, it is known as-----			
	a)	Compound	b)	Edge
	c)	Hedge	d)	Shrubbery
	5)Which is not a garden style			
	a)	English	b)	American
	c)	French	d)	Mughal
	6) Which irrigation method is most suitable for lawn			
	a)	Furrow	b)	Drip
	c)	Basin	d)	Sprinkler
	7) In a formal garden, the imaginary central line is known as			
	a)	Edges	b)	Axis
	c)	Focal point	d)	Hedges
	8) Which of the following plant is suitable for pergola			
	a)	Thuja	b)	Jasmine
	c)	Casurina	d)	Phylanthus
	9)Plant, most suitable for topiary			
	a)	Tecoma	b)	Bouganvillia
	c)	Clerodendron	d)	Hibiscus
	10) In any garden generally an architectural feature is focused as			
	a)	Unity	b)	Axis
	c)	Focal point	d)	Texture
	11) How should garden appear larger than its actual size			
	a)	By planting lawns at periphery	b)	By planting shade plants in centre
	c)	By keeping more space under lawn	d)	By growing tall growing plants at periphery
12) When path goes from one level to other, which feature in garden is necessary				
a)	Fencing	b)	Garden wall	
c)	Steps	d)	Concrete edging	
13)Which of the following is the ornamental foliage shrub				
a)	Clerodendron,	b)	Thevetia	
c)	Duranta	d)	Hibiscus	
14) Alternenthra plant is suitable for -----				
a)	Hedge	b)	Shrubbery	
c)	Flower bed	d)	Carpet bedding	
15) Which of the following plant is most suitable for shrubbery				
a)	Bahunia	b)	Hollyhock	

c)	Chrysanthemum	d)	Alternanthera
16) Plant suitable for rockery			
a)	Canna	b)	Cactus
c)	Lantana	d)	Acalypha
17) It is a garden not only beautify the premises but also help in checking pollution			
a)	Urban park	b)	National park
c)	Industrial garden	d)	Arboretum
18) Which of the following tree is used as foliage avenue tree			
a)	Gulmohor	b)	Neem
c)	Bottle brush	d)	Kanchan
19) Agave belongs to which of the following group			
a)	Ferns	b)	Palms
c)	Cactus and succulents	d)	Bonsai
20) It is a garden meant for preserving the natural beauty of area and allow free movement of wild life.			
a)	Urban park	b)	Arboretum
c)	National park	d)	Industrial garden
21) Flower bed in the garden is attractive feature, require -----			
a)	Partial sunlight	b)	Full sunlight
c)	Full shade	d)	Partial shade
22) Which of the following is the flowering climber			
a)	Rangoon creeper	b)	Monstera
c)	Money plant	d)	Asparagus
23) In which garden style surprise is lost			
a)	Formal	b)	Informal
c)	Free	d)	Wild
24) ----- is an important operation to restrict the growth in bonsai culture			
a)	Root pruning	b)	Balance fertilization
c)	Bending	d)	Watering

Signature of the course teacher

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