

OBJECTIVE TYPE QUESTIONS & ANSWERS

Introduction

Questions:

1. Choose the correct answers in the following:

1. How many spices grown in India.
a) 60 b) 63 c) 62 d) 65
2. Which is the chemical present in cloves that inhibits the growth of bacteria
a) Ethanol b) Methanol c) Eugenol d) None of these
3. Share of spices in the world trade is
a) 2-5 % b) 5-15 % c) 20-25 % d) 15-20 %
4. Leading state in black pepper production in India
a) Kerala b) Karnataka c) Maharastra d) None of these
5. In India the area under turmeric during 2009-10 was
a) 1.50 lakh hectares b) 1.90 lakh ha. c) 1.80 lakh ha. d) 1.20 lakh ha.
6. Spices that are irradiated, reheated with ethylene oxide are prohibited under
a) ISD guidelines b) ASIA specification c) Japanese Sanitation law d) All these
7. To avoid mould infestation and rancidity some spices need to be stored at low temperature of about
a) 0.5°C b) 2-5°C c) 1-5°C d) 0.5°C
8. Which country is the major competitor for Indian black pepper
a) Vietnam b) China c) Bangladesh d) Japan
9. Indian Cardamom Research Institute started in the year
a) 1976 b) 1974 c) 1978 d) 1972
10. Method of propagation followed in clove is
a) Trench method b) Inarching on seedling c) Grafting d) Rhizomes
11. The volatile oil content of different spices varies from
a) 0.1 to 0.5 % b) 1 to 8 % c) 0.1 to 18 % d) 0.1 to 10 %

ii. Write whether the following statement is true or false:

1. Species and condiments are high volume and low value crops.
2. Indian spice export showing increasing trend of export earnings in recent years.
3. Ground spices tend to have better shelflife than whole spices.
4. Internal price of black pepper is dependent on foreign demand.
5. In Kerala spices are marketed through regulated markets.
6. The CPCRI was upgraded and designated as National Research Centre for spices in 1986.
7. Phytophthora foot rot disease found in Ginger.
8. Encapsulation is a method used to prevent moulds in spices.
9. India at present exports around 100 tonnes of different varieties of organic spices.
10. Chilli is considered as major seed spice.

iii. Match the following:

Part - A		Part - B	
1	Garcinia	A	Reducing bacterial load in spices
2	Grinding and sterilizing	B	Temperate spice
3	Cardamom	C	Extraction of the dry spice
4	Turmeric	D	Enginia Caryophylus
5	Gamma irradiation	E	Pungent spice
6	Saffron	F	Sugandham
7	Mustard	G	Anti obesity
8	Clove	H	Katte disease
9	Ginger	I	Brassica juncea
10	Oleoresin	J	Decrease the volatile oils in spices

Answers:

I main		II main		III main	
Sl No	Answers	Sl No	Answers	Sl No	Answers
1	a	1	F	1	G
2	c	2	T	2	J
3	c	3	F	3	H
4	a	4	T	4	F
5	c	5	F	5	A
6	c	6	T	6	B
7	b	7	F	7	I
8	a	8	F	8	D
9	a	9	F	9	E
10	b	10	F	10	C
11	c				

Black pepper

Questions:

1. choose the correct answer in the following:

1. *Piper nigrum* is the botanical name of
 - a) Black pepper
 - b) Hot Pepper
 - c) Sweet Pepper
 - d) None of these
2. Black pepper belongs to the family
 - a) Solanaceae
 - b) Papilionaceae
 - c) Piperaceae
 - d) None of these
3. Black pepper is also called as
 - a) King of spices
 - b) Black gold
 - c) Both a and b
 - d) None of these
4. Origin of black pepper is
 - a) Mexico
 - b) India
 - c) Ethiopia
 - d) Southern America
5. Major black pepper producing state of India is
 - a) Kerala
 - b) Sikkim
 - c) Rajasthan
 - d) None of these
6. Growth habit of black pepper is
 - a) Small bushy plant
 - b) Study erect plant
 - c) Climbing evergreen plant
 - d) None of the above
7. One inflorescence of black pepper plant bears
 - a) 1-2 flowers
 - b) 4-8 flowers
 - c) 10-20 flowers
 - d) More than 50 flowers
8. Indian Institute of Spice Research is located at
 - a) Tiruvanthapuram
 - b) Calicut
 - c) Jodhpur
 - d) Bikaner
9. Foot rot disease in black pepper is caused by
 - a) Phytophthora
 - b) *Pseudomonas*
 - c) Virus
 - d) *Xanthomonas*
10. Due to the oxidation of colourless phenolic compounds in pepper skin, its colour changes to
 - a) Orange
 - b) Red
 - c) Green
 - d) Black

11. Essential oil content in black pepper ranges between
 a) 0.025 to 0.05 % b) 2.5 to 3.5 % c) 8-10 % d) None of these
12. Oleoresin is extracted from
 a) Small cardamom b) Large cardamom c) Black pepper d) All of these
13. The biting taste of black pepper is due to the presence of the alkaloid
 a) Piperine b) Chovicine c) Peiperidine d) All of these
14. Pepper Research Station is located in Kerala at
 a) Panniyur b) Kochi c) Kottayam d) Trivendrum
15. White pepper is developed from
 a) Hot pepper b) Black pepper c) Both a and b d) None of these

II. State whether true / false

1. Black pepper starch contains minute polygonal granules resembling rice.
2. Kerala contributes to 95 % of the total black pepper production in India.
3. India is the largest exporter of black pepper in the world.
4. Black pepper flowers are protogynous.
5. Black pepper cannot be propagated by seeds.
6. Black pepper require 50 % or little less shade for good growth and production.
7. Spike shading is a major disorder in black pepper which results in considerable losses in yield.
8. Pepper is a perennial vine and bearing starts after third of planting.
9. Pepper is preferably grown in low rainfall areas.
10. Pepper varieties can yield upto 10 q/ha.

III. Match the following:

Part-A		Part-B	
1	Black pepper variety Narayakkodi	a	10-12 %
2	Essential oil in black pepper	b	Tolerant to food rot disease
3	Oleoresin content in black pepper	c	2.5 to 3.5 %
4	Kerala's share in India's total black pepper production	d	10-13 %
5	Optimum moisture content in white pepper	e	95 %

Answers:

I main		II main		III main	
Sl No	Answers	Sl No	Answers	Sl No	Answers
1	a	1	T	1	b
2	c	2	T	2	c
3	c	3	T	3	d
4	b	4	T	4	e
5	a	5	F	5	a
6	c	6	T		
7	d	7	T		
8	b	8	T		
9	a	9	F		
10	d	10	T		
11	b				
12	d				
13	b				
14	a				
15	c				

Small Cardamom

Questions:

I. Choose the correct answer in the following:

1. *Elettaria cardamomum* is the botanical name of
 - a) Black pepper
 - b) Small cardamom
 - c) Large Cardamom
 - d) Zinger
2. Small cardamom belongs to the family
 - a) Cucurbitaceae
 - b) Cruciferae
 - c) Zingiberaceae
 - d) None of these
3. Single capsule of small cardamom contains
 - a) 1-2 seeds
 - b) 15-20 seeds
 - c) 100-150 seeds
 - d) > 250 seeds
4. Vijetha (NKE-12) is a virus resistant variety of
 - a) Small cardamom
 - b) Turmeric
 - c) Garlic
 - d) Cassava
5. Katte disease in small cardamom is transmitted through
 - a) Suckers
 - b) Tissue culture plants
 - c) both a and b
 - d) None of these
6. Life cycle of small cardamom is
 - a) Annual
 - b) Biennial
 - c) Perennial
 - d) None of the above
7. Breeding behaviour of small cardamom is
 - a) Self pollinated
 - b) *Cross pollinated*
 - c) Often cross pollinated
 - d) None of these
8. Average yield of dry capsules in small cardamom is
 - a) 200-500 kg/ha.
 - b) 2-5 t/ha.
 - c) 5-10 t/ha.
 - d) 10-15 t/ha.
9. The botanical name of large cardamom is
 - a) *Amomum subulatum*
 - b) *Elettaria cardamomum*
 - c) *Cardamom esculentum*
 - d) None of these
10. Ramsey, Sawney and Golshai are three major cultivars of
 - a) Small cardamom
 - b) Large cardamom
 - c) Zinger
 - d) Turmeric

11. Large cardamom can be propagated by
 a) Seed b) Rhizome slip c) both a and b d) None of these
12. Germination percentage of large cardamom is
 a) Approx 40 % b) Approx 80 % c) Approx 90 % d) Approx 95 %
13. First harvest in large cardamom can be obtained after
 a) 1 year b) 3 years c) 6 years d) 10 years
14. Origin of large cardamom is
 a) India b) USA c) Mediterranean region d) Ethiopia
15. Single inflorescence of large cardamom contains
 a) 2-5 flower b) 8-10 flowers c) 40-50 flowers d) 100-150 flowers

II. State whether true or false :

1. Small cardamom is a shade loving plant.
2. Small cardamom has its origin in India.
3. Small cardamom needs high temperature (more than 40°C) for its growth.
4. Malabar, Mysore and Vazhukka are major cultivated types of small cardamom.
5. According to the studies, Malabar varieties do not perform well under high density planting.
6. Small cardamom is a surface feeder.
7. NAA sprays help in increased fruit set.
8. Optimum soil pH for successful growth of cardamom is less than 4.5.
9. 'Trashing' is the process of removing old suckers and dry leaves to promote better production of new suckers.
10. Hot sun drying of small cardamom after harvest helps in retaining attractive green colour of small cardamom.

III. Match the following:

Part-A		Part-B	
1	Queen of spices	a	Prostrate type
2	Badi Elaichi	b	Erect
3	Malabar variety of small cardamom	c	Small cardamom
4	Mysore type of small cardamom	d	Semi-erect
5	Vazhukka type small cardamom	e	Large cardamom

Answers:

I main		II main		III main	
Sl No	Answers	Sl No	Answers	Sl No	Answers
1	b	1	T	1	c
2	c	2	T	2	e
3	b	3	F	3	a
4	a	4	T	4	b
5	a	5	F	5	d
6	c	6	T		
7	b	7	T		
8	a	8	F		
9	a	9	T		
10	b	10	F		
11	c				
12	a				
13	b				
14	a				
15	c				

Large Cardamom

Questions:

I. Choose the correct answer in the following:

1. Large cardamom is also known as
 - a) Nepal Cardamom
 - b) Bhutan cardamom
 - c) Indian Cardamom
 - d) Bengal Cardamom
2. Fruits of large cardamom is almost the size of
 - a) Small cardamom
 - b) Pepper
 - c) Nutmeg
 - d) Cinnamon
3. Scientific name of large cardamom
 - a) Amomum subulatum
 - b) Elettaria cardamomum
 - c) Aframomum subulatum
 - d) None of these
4. The mature plant height of large cardamom is
 - a) 1.5-3.0 m
 - b) 3.0-4.0 m
 - c) 4.0- 5 m
 - d) 5-6.0 m
5. Capsules of large cardamom having the colour of
 - a) Greenish yellow
 - b) Redish- brown
 - c) Greenish white
 - d) Yellowish green

II. Match the following :

Part -A		Part - B	
1	Ramsey	a	High yielding variety
2	ICRI Sikkim-1	b	Essential oil
3	Value added product	c	Large cardamom
4	Fruits	d	Cultivar of large cardamom
5	Greater cardamom	e	Eaten raw at sikkim

Answers

I

- 1 a
- 2 c
- 3 a
- 4 a
- 5 b

II

- 1 d
- 2 a
- 3 b
- 4 e
- 5 c

Ginger
OBJECTIVE TYPE QUESTIONS & ANSWERS

Questions:

I. choose the correct answers in the following:-

1. For propagation in Ginger, ideal rhizome weight should be....
(a) 10-15 g (b) 60-70 g (c) 25-50 g (d) 80-100 g.
2. Origin of Ginger
(a) South-East Asia (b) Australia (c) Mediterranean region (d) Guatemala.
3. Green ginger harvested at the age of
(a) 3-4 months (b) 7-8 months (c) 5-6 months (d) 9-10 months.
4. Exotic variety of Ginger is
(a) Wynad (b) Rio de Janeiro (c) Manathodi (d) Karkala
5. Croppin of Duration of Ginger crop is
(a) 5-6 months (b) 7-8 months (c) 10-12 months (d) 3-4 months.

II. State (tick) true or false:

1. Ginger is a dicotyledon crop.
2. For getting bleached ginger, fresh rhizomes are soaked in copper for 6 hours.
3. India is the largest producer, consumer and exporter of Ginger.
4. Inflorescence of Ginger arises directly from the root stock is spicate.
5. Fruit production in ginger is very common.
6. IISR Mahima is a nematode resistant variety.
7. Irrigation is withheld 15-20 days before harvesting of the crop.
8. Green ginger forms the major bulk of international trade.
9. Ginger oleoresin (3.5-9 %) is obtained by the solvent extraction of ginger powder.
10. Calicut (NGK) Grade of Ginger has specification of Garbled, bleached and less than 20mm rhizome size.

III. Match the following:

Part - A		Part – B	
1	Ginger Seed Technology Protocol	a	Malabar ginger type
2	Crystallised ginger	b	Lacks pungency
3	V ₃ S ₁ -8	c	3 fingers
4	Cochin ginger	d	Garbled, non bleached
5	Rhizome B grade	e	IISR, Calicut
6	Calicut (NGC)	f	Jamaica

7	Ginger oil	g	Sodium azide Mutant
8	Surabhi	h	Three valved capsule
9	Ginger fruit	i	Induced mutant of Rudrapur local
10	Local variety	j	Sugar syrup impregnation

Answers:

I main		II main		III main	
Sl No	Answers	Sl No	Answers	Sl No	Answers
1	c	1	F	1	e
2	a	2	F	2	j
3	c	3	T	3	g
4	b	4	T	4	a
5	b	5	F	5	c
		6	T	6	d
		7	T	7	b
		8	F	8	i
		9	T	9	h
		10	F	10	f

Turmeric

Questions:

I. Choose the correct answer in the following:

1. The yellow pigment present in rhizome of turmeric is
a) Curcumin b) Capsicin c) Capsanthin d) Charam
2. The largest producer and exporter of turmeric is
a) Sri Lanka b) Pakistan c) India d) Malaysia
3. The content of extraneous matter in Alleppey finger turmeric according to American Spice Trade Association is
a) < 0.5 % b) > 0.5 % c) 0.5 % d) 1.0 %
4. The value added product of turmeric is
a) Curcuminoids b) Dehydrated turmeric powder c) Oleoresin d) All of these
5. When curcumin comes in contact with alkali it turns
a) Blue b) Green c) Yellow d) Red

II. State whether the following sentences are True or False:

1. Turmeric prefers a warm and humid climate.
2. Turmeric is grown as a perennial crop.
3. Yield of polished turmeric from the raw material varies from 15-25 %.
4. Finger turmeric is graded as 'Special' and 'Fair'.
5. Use of growth regulators like kinetin, CCC and MH increase curcumin content of rhizomes.

Answers

I

- | | |
|---|---|
| 1 | a |
| 2 | c |
| 3 | a |
| 4 | d |
| 5 | d |

II

- | | |
|---|-------|
| 1 | True |
| 2 | False |
| 3 | True |
| 4 | False |
| 5 | True |

Clove

Questions:

I. Underline the correct answer in the following:

1. Part of commerce in clove is
 - a) Leaves
 - b) Unopened flowers bud
 - c) Fruit
 - d) Aromatic bark
2. Major volatile oil present in clove is
 - a) Eugenol
 - b) Glycol
 - c) Gerenoil
 - d) Caryoplyllene
3. Clove variety considered for best appearance.
 - a) Madagascar
 - b) Zannibas
 - c) Peuang
 - d) Cochin
4. One kg of clove contains number of dried cloves.
 - a) 5000-6000
 - b) 1000-1500
 - c) 11000-15000
 - d) 20000-25000
5. Quality of dried spice of clove depends on
 - a) Appearance
 - b) Size
 - c) Aromatic characteristics
 - d) All of the above

II. Write whether the following sentences are True or False:

1. Distinct bud variant having bolder flower buds. Than the normal type is known as king clove.
2. Clove is propagated through seed which is called the mother's of clove.
3. Clove seeds has long viability.
4. The defective cloves in grading is known as khoker cloves.
5. On drying cloves retain about 2/3rds of their original fresh green weight.

Answers

I

- | | |
|---|---|
| 1 | b |
| 2 | a |
| 3 | c |
| 4 | c |
| 5 | d |

- | | | |
|----|---|-------|
| II | 1 | True |
| | 2 | True |
| | 3 | False |
| | 4 | True |
| | 5 | Tru |

Cinnamon

Questions:

I. Write whether the following sentences are True or False:

1. Cinnamon has Eugenol as main constituent in the leaf oil.
2. For propagation in cinnamon fruits are picked when the outer pulp begins to turn red.
3. About 4 kg of bark oil can be obtained from a hectare of cinnamon plantation.
4. Commercial cinnamon bark should be more than 0.5 cm thicker and thicker the bark better the grade.
5. Bark which cannot be taken out like tubes are called quillings and the scraped pieces called feathering.

II. Multiple choices questions:

1. Preservation of moisture in cinnamon bark is known as
 - a) Ripping
 - b) Piping
 - c) Sipping
 - d) Nipping
2. IISR, Calicut released improved variety of cinnamon.
 - a) Divyashree
 - b) Nithyashree
 - c) Rathnashree
 - d) Meghashree
3. Native of cinnamon is
 - a) Sri lanka
 - b) China
 - c) Pakistan
 - d) Japan
4. Cinnamon belongs to family
 - a) Anacardiaceae
 - b) Mysitiaceae
 - c) Lauraceae
 - d) Leguminaceae
5. Among the following, one is not the variety of cinnamon.
 - a) Sweet cinnamon
 - b) Honey cinnamon
 - c) Snake cinnamon
 - d) Hot cinnamon.

Answers :

I

- 1 True
- 2 False
- 3 True
- 4 False
- 5 True

II

- 1 b
- 2 b
- 3 a
- 4 b
- 5 d

Nutmeg

Questions:

I. Under line the correct answer in the following:

1. Nutmeg oil contains.
a) Myristicin b) Eugenol c) Linalool d) Cryophyllea
2. Chromosome number of nutmeg is
a) $2n=32$ b) $2n=42$ c) $2n=18$ d) $2n=24$
3. The mace to nutmeg ratio on dry weight basis
a) 4:20 b) 1:25 c) 8:60 d) 3:20
4. Nutmeg is propagated through
a) Seeds b) Epicotyl grafting c) Patch budding d) All of these
5. Successful approach grafting done on root stocks of
a) *M. Fragrans* b) *M. omalabarica* c) *M. Beddomei* d) All of these

II. Write whether the following sentences are True or False:

1. Nutmeg is monoecious in nature.
2. East Indian nutmegs are highly aromatic and superior compared to west Indian variety.
3. The fruits are ripe and ready for harvesting the pericarp splits open.
4. Nutmegs are adulterated with Bombay nutmegs which are odourless and tasteless.
5. For every 100 kg of nutmeg, a tree produces only 4 kg of mace.

Answers:

I

- | | |
|---|---|
| 1 | a |
| 2 | b |
| 3 | d |
| 4 | d |
| 5 | d |

- | | | |
|----|---|-------|
| II | 1 | False |
| | 2 | True |
| | 3 | True |
| | 4 | True |
| | 5 | True |

Allspice

Questions:

I. Under line the correct answer in the following:

1. Allspice ovary is inferior and
a) 3 celled b) 2 celled c) 4 celled d) One celled
2. To ensure sufficient pollination in Allspice female to male ratio planting is
a) 10:2 b) 6:1 c) 8:1 d) 9:3
3. Allspice tree comes to full bearing stage in
a) 20-25 years b) 10-15 years c) 8-10 years d) 4-5 years
4. Scientific name of Allspice is
a) *Pimento dioica* b) *Pimento allspicae* c) *Syzygium dioica* d) *Eugenia officinalis*
5. Common method of propagation of allspice
a) Grafting b) Air layering c) Seeds d) Budding

II. Write whether the following sentences are True or False:

1. Allspice posses characteristic flavour and aroma of cloves, nutmeg and fennel
2. Allspice is structurally hermaphrodite, but, functionally dioecious.
3. Allspice generally best seed under all agro-climatic conditions.
4. Unique berry of allepice is more spicy and peppy in taste.
5. Jamaican pimento has best appearance, aroma flavour and volatile oil content.

Answers

I

- | | |
|---|---|
| 1 | b |
| 2 | c |
| 3 | a |
| 4 | a |
| 5 | c |

- | | | |
|----|---|-------|
| II | 1 | False |
| | 2 | True |
| | 3 | False |
| | 4 | True |
| | 5 | True |

Coriander

Questions:

I. Under line the correct answer in the following:

1. The essential oil content of the coriander seed is about.
a) 0.1 to 0.7 % b) 0.5 to 0.9 % c) 1.0 to 1.2 % d) 0.5 to 0.75 %
2. The scientific name of coriander is
a) *Alium coriandrum* b) *Coriandrum sativum* c) *Sativum coriandrum*
d) None of these
3. The active principle of the coriander is
a) Capcicin b) Allicin c) Anithol d) Linolool
4. Spacing followed in coriander is
a) 10-20 x 5 cm b) 20-30 x 10 cm c) 15-20 x 10 cm d) None of these
5. Per hectare seed rate requirement in coriander for irrigated crop is
a) 10-15 kg b) 5-10 kg c) 10-20 kg
d) 20-25 kg

II. Match the following:

Part-A		Part-B	
i	Coriander seed treatment	a	Co 1
ii	Weedicide for coriander	b	UD 20
iii	Coriander variety for seed purpose	c	1.5 – 3 mm
iv	Micro carpum	d	Agrosan – GN
v	Coriander variety for dual purpose	e	Pendimethalin

Answers

I

- 1 a
- 2 b
- 3 d
- 4 b
- 5 a

II

- 1 d
- 2 e
- 3 b
- 4 c
- 5 a

Fennel

Questions:

I. Choose the correct answer in the following:

1. The major constituent of the fennel oil is
a) Methyle b) Anethole c) Aectol d) None of these
2. The percentage of protein present in fennel seed is
a) 10-12 % b) 15-20 % c) 14-22 % d) 5-10 %
3. The frost damage in fennel crop can be minimised by spraying.
a) Sulphuric acid b) Acetic acid c) Hydrochloric acid d) None of these
4. The per hectare seed yield in fennel ranges from
a) 5-10 quintals b) 10-15 quintals c) 15-20 quintals d) 20-25 quintals
5. Which crop is found to be remunerative as intercrop with fennel.
a) Radish b) Tomato c) Cabbage d) Cauliflower

II. Write whether the following sentences are True or False:

1. Fennel oil is used as germicide.
2. Fennel crop is best suited to South Indian weather.
3. PF-35 is a fennel seed variety developed by Tamilnadu Agricultural University.
4. The fennel seeds from Lucknow are higher priced than those from other areas.
5. The oil obtained from fennel fruit is white in colour.

Answers

I

- | | |
|---|---|
| 1 | b |
| 2 | c |
| 3 | a |
| 4 | d |
| 5 | a |

- | | | |
|----|---|-------|
| II | 1 | True |
| | 2 | False |
| | 3 | False |
| | 4 | True |
| | 5 | False |

Fenugreek

Questions:

I. Choose the correct answer in the following:

1. In India, Fenugreek is commonly called as
 - a) Palau
 - b) Methi
 - c) Mint
 - d) None of these
2. The scientific name of fenugreek is
 - a) T Lycopersicum esculentum
 - b) T Foenum graecum
 - c) Foeniculum vulgare
 - d) None of these
3. Which is the leading state in fenugreek production.
 - a) Rajasthan
 - b) Maharastra
 - c) Chennai
 - d) Gujarath
4. The average grain yield of fenugreek is about.
 - a) 5-10 q/ha.
 - b) 10-15 q/ha.
 - c) 15-20 q/ha.
 - d) None of these
5. Which is the growth regulator used to improve the seed number and size.
 - a) Phosphoric acid
 - b) Acetic acid
 - c) Sulphuric acid
 - d) Ascorbic acid

II. Write whether the following sentences are True or False:

1. Fenugreek is the first largest seed spice in India.
2. Fenugreek seeds are used in hair tonic preparations.
3. A seed rate of 15-25 kg/ha. is used for fenugreek seed crop.
4. The ideal sowing time for fenugreek in North India is from the last week of November to first week of December.
5. The optimum pH for best growth and production of fenugreek is 7-8.

Answers

I

- | | |
|---|---|
| 1 | b |
| 2 | b |
| 3 | a |
| 4 | b |
| 5 | d |

II

- | | |
|---|-------|
| 1 | False |
| 2 | True |
| 3 | True |
| 4 | False |
| 5 | False |

Dill

Questions:

I. Under line the correct answer in the following:

1. The major constituent of dill seed oil is
a) Carvone b) Acetone c) Methane d) All the three
2. Which is the best suited variety of dill recommended for cultivation in India.
a) English stock b) Standard bearer c) Improve Japanees
d) None of these
3. How many irrigations required for Dill crop.
a) 7-8 b) 8-9 c) 9-10 d) 10-11
4. Dill is propagated by
a) Cuttings b) Seeds c) Suckers d) None of these
5. Essential oil of dill is used to manufacture
a) Soaps b) Perfumes c) Hair oil d) All the three

II. . Match the following:

Part-A		Part-B	
i	Aroma in Dill	a	16.8 %
ii	Fat content in essential oil of dill seed	b	1.2 to 4 % volatile oil
iii	Protein content in essential oil of dill seed	c	2.5 to 4.0 % volatile oil
iv	Indian dill	d	Hexa hydrobenzofuran
v	European dill	e	15.1 %

Answers

I

- 1 a
- 2 a
- 3 b
- 4 b
- 5 a

- #### II
- 1 d
 - 2 a
 - 3 e
 - 4 b
 - 5 c

Cumin

Questions:

I. Under line the correct answer in the following:

1. What is the botanical name of cumin.
a) *Cuminum cynimum* b) *Cymin cumin* c) *Apium cuminum* d) None of these
2. Cumin belongs to the family
a) Cruciferae b) Umbelliferae c) Zingiberaceae d) Alliaceae
3. Volatile oil content in cumin seed is
a) 8-10 % b) 0-1 % c) 2.5-45 % d) 15-18 %
4. Origin of cumin is
a) Mediterranean region b) Africa c) India d) South America
5. Optimum soil pH range for cumin cultivation is
a) 4.5-6.0 b) 5.5-6.0 c) 5.0-7.0 d) 7.0-9.5

II. Write whether the following sentences are True or False:

1. Cumin is an annual herbaceous plant.
2. Cumin is a temperate crop.
3. RS-1, RZ-19, UC-217, UC-220, are the varieties cumin.
4. Sel. 7-3 variety of cumin (IARI) is resistant to wilt disease.
5. The old cumin seeds yield more essential oil than fresh ones.

Answers

I

- | | |
|---|---|
| 1 | a |
| 2 | b |
| 3 | c |
| 4 | a |
| 5 | d |

- | | | |
|----|---|-------|
| II | 1 | True |
| | 2 | False |
| | 3 | True |
| | 4 | True |
| | 5 | False |

Celery

Questions:

I. Under line the correct answer in the following:

1. What is the botanical name of celery.
a) *Apium graveolens* b) *Anethum graveolens* c) *Allium graveolens* d) None of these
2. Celery belongs to the family
a) Umbelliferae b) Alliaceae c) Cruciferae d) Zingiberaceae
3. Major constituent of celery essential oil is
a) Cuminaldehyde b) Limonene c) Capsanthin d) None of these
4. Which one of following is the variety of celery
a) Standard Bearer b) Wright Grove Giant c) Both a and b d) None of these
5. The colour of volatile oil extracted from celery is
a) Transparent white b) Green c) Blue d) Pale yellow

II. Write whether the following sentences are True or False:

1. Celery is a seed propagated crop.
2. Celery behaves as annual plant in plains and as biennial plant in cooler hills.
3. Average yield of celery is 5-6 t/ha.
4. Celery is a native of lowlands of Italy.
5. In India, Punjab is the major celery producing state.

Answers

I

- | | |
|---|---|
| 1 | a |
| 2 | a |
| 3 | b |
| 4 | c |
| 5 | d |

- | | | |
|----|---|-------|
| II | 1 | True |
| | 2 | True |
| | 3 | False |
| | 4 | True |
| | 5 | True |

Vanilla

Questions:

I. Underline the correct answer in the following:

1. The ideal time for pollination in vanilla is between
a) 5 am & 12 noon b) 6 am & 1 pm c) 2 pm & 5 pm d) None of these
2. Based on the countries of origin, the vanilla beans are distinguished into major types.
a) 5 b) 3 c) 4 d) 7
3. The standards for vanilla are planted at a spacing of
a) 2.5-3 x 2 m b) 3.5 x 2.5 m c) 2 x 2 m d) None of these
4. The curing of vanilla involves stages.
a) 5 b) 4 c) 6 d) 3
5. The process which stops vegetative development and initiates reactions responsible for producing aroma and flavour is
a) Conditioning b) Killing c) Sweating d) Drying

II. Write whether the following sentences are True or False:

1. Vanilla is commercially propagated by stem cuttings.
2. Vanilla poisoning is called vanillism.
3. Killing or wilting in vanilla is indicated by the development of a red colouration in the beans.
4. The vanilla beans are divided into four important grades.
5. Spraying of 2, 4-D and G.A. helps in development of parthenocarpic beans.

Answers

I

1. b
2. c
3. a
4. b
5. b

II

1. True
2. True
3. False
4. True
5. True