

Tropical and Subtropical Vegetable

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PART-I (Objective-20 Marks)

Max. Time: 1/2 hr

Q1 Fill in the blanks: (10 x 0.25= 2.5)

- 1) According to ICMR, the per capita vegetable requirement in India is.....
- 2)is known as vegetable of 21st century.
- 3) Red colour in tomato is due to the presence of.....pigment.
- 4)is bitter principle present in cucumber.
- 5) Dry chilli contains.....% stalk,.....% pericarp and.....% see
- 6) is the YVMV resistant variety of okra.
- 7) Vector of little leaf disease in brinjal is.....
- 8)is the hermaphrodite cultivar of ridge gourd.
- 9) The progenitor/ancestor of french bean is.....
- 10)is the single seeded cucurbit vegetable crop.

Q2 Write down whether the statement is true or false (T/F): (10 x 0.25= 2.5)

- 1) 'Pusa Sheetal' variety of tomato can set the fruits up to temperature of 8 °C. (.....)
- 2) Predominant sex form in cucurbits is 'monoecious'. (.....)
- 3) 'Manjri Gota' is bicolour variety of brinjal. (.....)
- 4) Pointed gourd is a perennial cucurbit which is propagated through vine cuttings. (..)
- 5) Okra seeds fail to germinate below 20° C soil temperature. (.....)
- 5) Low temperature and high humidity promotes female flowers in cucumber. (.....)
- 7) 'Blossom End Rot' in tomato is caused due to the deficiency of boron. (.....)
- 8) Pungency in chilli is due to the presence of capsaicin. (.....)
- 9) Perennial type of drumstick is propagated through limb cuttings. (.....)
- 10) 'Arka Suryamukhi' is a popular variety of cucumber. (.....)

Q3 Choose the correct answer: (10 x 0.25=2.5)

- 1) Yard long bean is botanically known as:
 - a) *V. U. ssp. Cylindrica* b) *V. U. ssp. mensensii* c) *V. U. ssp. sesquipedalis* d) None of these
- 2) Which of the following is known as "Four angled bean":
 - a) French Bean b) Cow pea c) Winged Bean d) Lima Bean
- 3) 'Petha' is prepared from:
 - a) Pumpkin b) Bottle gourd c) Ash gourd d) Bitter gourd
- 4) Tetraploid (4x) species of amaranthus is:
 - a) *A. tricolor* b) *A. dubius* c) *A. blitum* d) *A. viridis*
- 5) 'Guar Gum' is extracted from:
 - a) Cowpea b) Snap Bean c) Cluster Bean d) Lab-lab bean
- 6) Red colour in chilli is due to the presence of pigment:
 - a) Lycopene b) Carotene c) Capsanthin d) Capsaicin
- 7) Ideal temperature for colour development in tomato is:
 - a) 18-21 °C b) 21-24 °C c) 15-18 °C d) 24-27 °C
- 8) Seed rate for summer crop in okra is:
 - a) 37-45 kg/ha b) 18-22 kg/ha c) 28-32 kg/ha d) 8-10 kg/ha
- 9) 'Pusa Chikni' is the variety of:
 - a) Bitter gourd b) Sponge gourd c) Bottle gourd d) Ridge gourd
- 10) 'Metazenia' is found in:
 - a) Cucumber b) Pumpkin c) Brinjal d) Chilli

Q4 Match the followings: (10 x 0.25= 2.5)

1.	Bitter gourd	a.)	Momordicin
2.	AVRDC	b.)	Taiwan
3.	IIVR	c.)	Varanasi
4.	Pusa Bedana	d.)	Triploid watermelon
5.	Brinjal	e.)	Poor man's vegetable
6.	Sponge gourd	f.)	Luffein
7.	Curry leaf	g.)	Ksenigin
8.	Amaranthus	h.)	C ₄ plant
9.	Basella	i.)	Malabar Night Shade
10.	Cowpea	j.)	Black eyed pea

Max. Marks: 50

(Tropical and Sub-tropical Vegetables)

Max. Time: 3 hrs.

PART-II (Subjective-30 Marks)

Max. Time: 2^{1/2} hrs.

Note: Attempt any six questions. Question number 1 is compulsory

- Q1 Write down the production technology of tomato/cucumber under the following heads: (5 x 1=5)
- Soil and climate
 - Commercial varieties/hybrids
 - Sowing/transplanting time
 - Seed rate and spacing
 - Harvesting and yield
- Q2 Briefly explain the importance and scope of vegetable production in India? (5)
- Q3 Briefly explain the different sex forms of cucurbits along with suitable example? (5)
- Q4 What do you mean by physiological disorder? Enlist the different physiological disorders of tomato along with their cause. (5)
- Q5 Write short notes on (any five): (5 x 1=5)
- Export potential of vegetables in India
 - Vegetable forcing
 - Methods of seed extraction in tomato
 - Harvesting stages in tomato
 - Classification of brinjal on the basis of heterostyly
 - Classification of cluster bean on the basis of growth habit
 - River bed cultivation of cucurbits
- Q6 Differentiate between (any five): (5 x 1=5)
- Determinate and Indeterminate tomato
 - Pole and bush type of French bean
 - Annual and perennial type of Indian bean
 - Monoecious and dioecious cucurbits
 - Short day and long day vegetables
 - Market garden and Truck garden
 - Leafy type and grain type amaranthus
- Q7 Do as directed (any five): (5 x 1=5)
- Write down the two major causes for bitterness in cucumber fruits
 - What are the critical stages of irrigation in beans
 - Enlist different grades of tomato
 - What are the different methods of vegetable hardening
 - Name the growth regulators used for sex modification in cucurbits
 - Write down the name of two species of grain type of amaranthus
 - What are the appropriate maturity indices to harvest muskmelon?
- Q8 Write down the two popular varieties/hybrids each of any five crops: (5 x 1=5)
- Capsicum
 - Okra
 - Moringa
 - Cluster bean
 - Muskmelon
 - Amaranthus