

## PROVISIONAL ANSWER KEY

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Question1:-The soil water potential at field capacity is

- A:-1500kpa
- B:-33kpa
- C:-0kpa
- D:-+33kpa

Correct Answer:- Option-B

Question2:-The element that is involved in the reduction of nitrate to nitrite is

- A:-Calcium
- B:-Nitrogen
- C:-Molybdenum
- D:-Boron

Correct Answer:- Option-C

Question3:-Hypogeal mode of germination is seen in

- A:-Green gram
- B:-Red gram
- C:-Horse gram
- D:-Black gram

Correct Answer:- Option-B

Question4:-Zinc deficiency in rice is known as

- A:-Bakanae disease
- B:-Tungro disease
- C:-Blast disease
- D:-Khaira disease

Correct Answer:- Option-D

Question5:-Fimbristylis miliacea is a \_\_\_\_\_ weed of rice.

- A:-grass
- B:-sedge
- C:-broad leaved
- D:-fern

Correct Answer:- Option-B

Question6:-The irrigation requirement (IR) of the cropped area is \_\_\_\_\_ if; WR is the water requirement, EP is the effective precipitation and S is the soil profile moisture.

- A:- $IR=WR-(EP+S)$
- B:- $IR=WR+(EP+S)$
- C:- $IR=WR+(EP-S)$
- D:- $IR=WR+EP$

Correct Answer:- Option-A

Question7:-Pegging is associated with which of the following crop?

- A:-Green gram
- B:-Black gram
- C:-Groundnut
- D:-Sugarcane

Correct Answer:- Option-C

Question8:-The female parent of hybrid napier is

- A:-Bajra
- B:-Setaria grass
- C:-Sugarcane
- D:-Rice

Correct Answer:- Option-A

Question9:-An example for preemergent herbicide is

- A:-2, 4-D
- B:-fenoxaprop
- C:-paraquat
- D:-oxyflufen

Correct Answer:- Option-D

Question10:-Calcium carbonate equivalency value is higher for

- A:-Wood ash
- B:-Quicklime
- C:-Dolomite
- D:-Hydrated lime

Correct Answer:- Option-B

Question11:-Statement 1: Stimulation occurs when a high level of a nutrient increases plant demand for another nutrient.

Statement 2: Increased nitrogen application and uptake creates a demand for more magnesium.

- A:-Statement 1 is correct and Statement 2 is wrong
- B:-Both Statements are correct
- C:-Statement 2 is correct and Statement 1 is wrong
- D:-Both Statements are wrong

Correct Answer:- Option-B

Question12:-Statement 1: Many chemical and biological reactions occur at the colloid solid-liquid interfaces.

Statement 2: Adsorption takes place at the interface.

- A:-Both Statements are correct
- B:-Statement 1 is correct and Statement 2 is wrong
- C:-Both Statements are wrong
- D:-Statement 2 is correct and Statement 1 is wrong

Correct Answer:- Option-B

Question13:-Statement 1: Carbohydrates are the third most abundant component of humus.

Statement 2: The carbohydrate concentration has been estimated to 30% in soil humus.

- A:-Both Statements are correct
- B:-Statement 1 is correct and Statement 2 is wrong
- C:-Both Statements are wrong
- D:-Statement 2 is correct and Statement 1 is wrong

Correct Answer:- Option-C

Question14:-Statement 1: Urease is an example of an induced enzyme.

Statement 2: Cellulase is an example of a constitutive enzyme.

- A:-Both Statements are correct
- B:-Statement 1 is correct and Statement 2 is wrong
- C:-Statement 2 is correct and Statement 1 is wrong
- D:-Both Statements are wrong

Correct Answer:- Option-D

Question15:-Assertion: Cation Exchange and base exchange both are different.

Reason: The reaction involves  $H^+$  ions.

- A:-Assertion and Reason both are correct
- B:-Assertion is correct but reason is wrong
- C:-Reason is correct but assertion is wrong
- D:-Both assertion and reason are wrong

Correct Answer:- Option-A

Question16:-Assertion A: Barium is strongly adsorbed by the clay but appears to have low penetrating power.  
Reason R: It exchange is less than would be expected from the amount of Ba adsorbed.

- A:-Assertion and Reason both are correct and R is not the correct explanation of A.
- B:-Assertion and Reason both are correct and R is the correct explanation of A.
- C:-Reason is correct but assertion is wrong.
- D:-Both assertion and reason both are wrong

Correct Answer:- Option-B

Question17:-Assertion A: Transition metals like Al, Fe, Mn, Cu and Zn and the organic compounds forms metal-organo complexes or chelates.  
Reason R: Humic and fulvic acids are especially important in the formation of such complexes.

- A:-Assertion is correct but reason is correct and R is not the correct explanation of A.
- B:-Reason is correct but assertion is wrong.
- C:-Both assertion and reason both are wrong.
- D:-Assertion and reason both are correct and R is the correct explanation of A.

Correct Answer:- Option-D

Question18:-Rank the following moisture regimes below from driest to wettest

- A:-Udic, aquic, aridic
- B:-Aquic, udic, aridic
- C:-Xeric, udic, aquic
- D:-Udic, Xeric aquic

Correct Answer:- Option-C

Question19:-Immobilization of sulphur occur in soil when C:S ratio is

- A:-<300:1
- B:->300:1
- C:->400:1
- D:-<200:1

Correct Answer:- Option-C

Question20:-Match the following:

- |                                 |                |
|---------------------------------|----------------|
| I. Dris                         | a. Mehlich     |
| II. EPP                         | b. Beaufils    |
| III. 1% Citric Acid             | c. Ramamoorthy |
| IV. Complimentary ion principle | d. Dyer        |

- A:-I-b, II-d, III-a, IV-c
- B:-I-c, II-d, III-a, IV-b
- C:-I-b, II-d, III-c, IV-a
- D:-I-b, II-c, III-a, IV-d

Correct Answer:- Option-A

Question21:-Recently invaded insect that threatened maize cultivation in India is

- A:-Spodoptera frugiferda
- B:-Spodoptera litura
- C:-Spodoptera exigua
- D:-Mythimna separata

Correct Answer:- Option-A

Question22:-Calasobruchus chinensis is a pest on pulses in

- A:-Field
- B:-Storage
- C:-Both 1 and 2
- D:-None

Correct Answer:- Option-C

Question23:-Recently discovered new insect order is

- A:-Mantophasmatodea
- B:-Grylloblattodea
- C:-Zoraptera

D:-Archaeognatha

Correct Answer:- Option-A

Question24:-Who decoded the dance language of honey bees?

A:-Karl Van Frish

B:-Charles Darwin

C:-Nicolas Tinbergen

D:-Carl Linneus

Correct Answer:- Option-A

Question25:-LD 50 values for oral toxicity of less toxic green molecules of insecticides is

A:-01 to 50

B:-51 to 500

C:-501 to 5000

D:->5000

Correct Answer:- Option-D

Question26:-Anamorphic development is found in the order

A:-Diplura

B:-Protura

C:-Collembola

D:-Thysanura

Correct Answer:- Option-B

Question27:-Bunchy top appearance and red coloured leaf mines near the midribs of sugarcane leaves is damage due to

A:-Scirpophaga incertulus

B:-Scirpophaga nivella

C:-Chilo infuscatellus

D:-Chilo sacchariphagus indicus

Correct Answer:- Option-D

Question28:-The Act it regulates imports, manufacture, storage, transport, sale, distribution and use of insecticides

A:-Fertilizer Act

B:-Essential Commodity Act

C:-Insecticide Act 1968

D:-Insecticide rules 1971

Correct Answer:- Option-C

Question29:-Juvenile Hormone is secreted by

A:-Carpora Allata

B:-Carpora Cardiaca

C:-Prothoracic Glands

D:-Neurosecretory Cells

Correct Answer:- Option-A

Question30:-Downward curling and tapering of leaves in chilli crop is due to feeding of

A:-Tetranychus urticae

B:-Polyphagotarsonemus latus

C:-Aceria cajani

D:-Aceria guerreronis

Correct Answer:- Option-B

Question31:-Dissemination of urediospores is mainly through

A:-Water

B:-Wind

C:-Soil

D:-Insect

Correct Answer:- Option-B

Question32:-Albugo candida is an

- A:-Obligate saprophyte
- B:-Facultative parasite
- C:-Facultative saprophyte
- D:-Obligate parasite

Correct Answer:- Option-D

Question33:-Coconut cadang cadang disease is caused by

- A:-Viroid
- B:-Phytoplasma
- C:-Spiroplasma
- D:-RLO

Correct Answer:- Option-A

Question34:-\_\_\_\_\_ present in the debris in the soil serve as the primary inoculum for grape vine downy mildew pathogen.

- A:-Zoospore
- B:-Conidium
- C:-Oospore
- D:-Sporangium

Correct Answer:- Option-C

Question35:-According to Koshy (1999) root wilt disease of coconut is of national importance as the disease causes an annual loss of \_\_\_\_\_ million coconuts in Kerala.

- A:-968
- B:-950
- C:-970
- D:-956

Correct Answer:- Option-A

Question36:-The foul smell caused by \_\_\_\_\_ a volatile compound is a good indication of wheat hill bunt infection in the field.

- A:-Triethylamine
- B:-Tributylamine
- C:-Trimethylamine
- D:-Tricarboxylamine

Correct Answer:- Option-C

Question37:-Growing cotton with sorghum or Phaseolus aconitifolius as intercrop reduced \_\_\_\_\_ disease.

- A:-Black arm
- B:-Wilt
- C:-Grey mildew
- D:-Root rot

Correct Answer:- Option-D

Question38:-\_\_\_\_\_ is a most important vector of the Pantoea Stewartii (Stewart's wilt of corn)

- A:-Pentalonia
- B:-Chaetocnema pulicaria
- C:-Bemisia tabaci
- D:-Aphis gossypii

Correct Answer:- Option-B

Question39:-Empty root of cassava is caused by

- A:-Phloem-restricted trypanosomatid
- B:-Xylem-restricted trypanosomatid
- C:-Laticifer-restricted trypanosomatid
- D:-Fruit and seed infecting trypanosomatid

Correct Answer:- Option-C

Question40:-The rice blast pathogen produces \_\_\_\_\_ toxin.

- A:- $\alpha$ - picolinic acid

B:-Zearalenone

C:-Victorin

D:-Trichotheclin

Correct Answer:- Option-A

Question41:-Complete dominance in the traits governed by two genes would result in phenotypic ratio of

A:-15:1

B:-9:3:3:1

C:-9:7

D:-9:6:1

Correct Answer:- Option-B

Question42:-Frame shift mutation is caused by which of the following mutagens?

A:-Alkalyting agents

B:-Acridine dyes

C:-Base analogues

D:-Both 2 and 3

Correct Answer:- Option-B

Question43:-In polygenic inheritance, which of the following statements are correct?

- (i) Equal effect can be produced by the genes involved in the expression of a character
- (ii) Epistasis and linkage is observed
- (iii) It possesses lack of dominance
- (iv) Each allele in the genes have additive effect

A:-i and ii

B:-Only ii

C:-i, ii and iv

D:-i, iii and iv

Correct Answer:- Option-D

Question44:-The criteria for the population to be in Hardy-Weinberg equilibrium

A:-Random mating

B:-Small population

C:-Selection and Mutation

D:-Genetic drift

Correct Answer:- Option-A

Question45:-Distant hybridization refers to

A:-Crossing between two species

B:-Crossing between two genus

C:-Crossing between two varieties

D:-Both 1 and 2

Correct Answer:- Option-D

Question46:-The mechanism of non preference mode of resistance to insects exhibited by the host plant is called as

A:-Anti xenosis

B:-Anti biosis

C:-Tolerance

D:-Avoidance

Correct Answer:- Option-A

Question47:-The genetic male sterility system of hybrid seed production is popularly adopted in which of the following crop?

A:-Rice

B:-Maize

C:-Pigeon Pea

D:-Pearl Millet

Correct Answer:- Option-C

Question48:-Which of the following in-vitro method adopted for the production of secondary metabolites?

A:-Callus culture

- B:-Meristem culture
- C:-Cell suspension culture
- D:-All

Correct Answer:- Option-C

Question49:-The major criteria by which the synthetics and composites differs is

- A:-testing for combining ability
- B:-wider adaptation
- C:-cross pollination
- D:-heterozygous population

Correct Answer:- Option-A

Question50:-A name or sign used on certain products or which corresponds to a specific location or origin

- A:-Patent
- B:-Trade mark
- C:-Geographical Indication
- D:-Trade name

Correct Answer:- Option-C

Question51:-The Section 8 of the Indian Seed Act 1966 is deals with

- A:-Power of Seed Inspector
- B:-Seed Analyst
- C:-Seed Certification Agency
- D:-Central Seed Laboratory

Correct Answer:- Option-C

Question52:-Which of the following seed extraction method is best for control of bacterial canker disease in the tomato?

- A:-Acid method
- B:-Fermentation method
- C:-Alkali method
- D:-Mechanical method

Correct Answer:- Option-B

Question53:-Which of the following Statement is/are correct about ground nut seed production operations?

- (i) Gypsum application increases peg penetration and pod formation
- (ii) Self-pollinated crop and stigma remains enclosed in the keel petal
- (iii) Darken plumel is noticed due to calcium deficiency

- A:-Only (i)
- B:-Both (i and ii)
- C:-Only (ii and iii)
- D:-All of the above (i, ii and iii)

Correct Answer:- Option-D

Question54:-The Andromonoecious flower in cucurbits means

- A:-Staminate and Pistillate flowers are produced separately in the same plant
- B:-Staminate and Hermaphrodite flowers produced separately in the same plant
- C:-Staminate, Pistillate and Hermaphrodite flowers are produced in the same plant
- D:-Pistillate and Hermaphrodite flowers are produced in the same plant

Correct Answer:- Option-B

Question55:-According to Indian Minimum Seed Certification Standards, the minimum germination percentage should be maintained for bhendi seed certification

- A:-90%
- B:-80%
- C:-65%
- D:-75%

Correct Answer:- Option-C

Question56:-Which of the following Statement is wrong about Seed Bill 2004?

- A:-Any type of seed which is for sale has to be registered with Registration Sub Committee

B:-Seed Bill, 2004 is replaced the earlier Seed Control Order, 1983

C:-All registered seed has to meet the minimum standards for germination, purity and permitted proportion of diseased seeds

D:-Every seed producer and dealer and horticultural nursery has to be registered with State Govt.

Correct Answer:- Option-B

Question57:-The seed lot A of 400 kg seeds with 70% germination and lot B seeds with 85% germination. How much of lot B seeds must be blended with lot A to get seed lot with germination of 80%?

A:-800 kg

B:-1000 kg

C:-500 kg

D:-2000 kg

Correct Answer:- Option-A

Question58:-The leaves and pods of the following seed growing crop is coated with thin film of Malic acid and Oxalic acid

A:-Vigna mungo

B:-Cicer arietinum

C:-Vigna unguiculata

D:-Cajanus cajan

Correct Answer:- Option-B

Question59:-Match the list I with list II:

List I	List II
i. Aerial seeding	1. Slurry comprising seed mulch and fertilizer
ii. Hydro seeding	2. Impregnation of seeds with bioactive chemicals
iii. Fluid drilling	3. Pre germinated seed suspension in viscous gel
iv. Seed infusion	4. Broadcasting pre imbibed seeds from air craft

A:-i-3, ii-1, iii-2, iv-4

B:-i-4, ii-2, iii-1, iv-3

C:-i-2, ii-1, iii-3, iv-4

D:-i-4, ii-1, iii-3, iv-2

Correct Answer:- Option-D

Question60:-In brinjal cultivars maximum seed set can be obtained in

- Short style flowers
- Medium style flowers
- Long style flowers
- Pseudo style flowers

Choose the correct answer

A:-Only i

B:-Both (ii and iii)

C:-Only iii

D:-All of the above (i, ii, iii and iv)

Correct Answer:- Option-B

Question61:-National Research Centre on citrus is located at

A:-Gwalior

B:-Nagpur

C:-Thane

D:-Mumbai

Correct Answer:- Option-B

Question62:-Parentage of Amrapali

A:-Neelum × Dashehari

B:-Dashehari × Neelum

C:-Neelum × Alphonso

D:-Ratna × Alphonso

Correct Answer:- Option-B

Question63:-A seedless mandarin variety suitable for segment canning

A:-M4

B:-N4

C:-K4



D:-L4

Correct Answer:- Option-B

Question64:-A plant growth hormone applied for reducing mango malformation

A:-NAA 200ppm

B:-NAA 400ppm

C:-NAA 100ppm

D:-NAA 1000ppm

Correct Answer:- Option-A

Question65:-Most important fruit crop of Kerala

A:-Cashew Nut

B:-Mango

C:-Banana

D:-Jackfruit

Correct Answer:- Option-C

Question66:-Commercial method of propagation in mango

A:-Epicotyl grafting

B:-Budding

C:-Air layering

D:-Stooling

Correct Answer:- Option-A

Question67:-Commercial method of propagation in guava

A:-Cutting

B:-Air layering

C:-Budding

D:-Grafting

Correct Answer:- Option-B

Question68:-Most popular training system adopted in grapes

A:-Head system

B:-Bower system

C:-Kniffin system

D:-Telephone system

Correct Answer:- Option-B

Question69:-Hen and chicken is due to the deficiency of

A:-Manganese

B:-Zinc

C:-Boron

D:-Magnesium

Correct Answer:- Option-C

Question70:-Artocarpus Heterophyllus is native to

A:-India

B:-Africa

C:-Pakistan

D:-Malaysia

Correct Answer:- Option-A

Question71:-Queen of fruits

A:-Mango

B:-Avocado

C:-Apple

D:-Mangosteen

Correct Answer:- Option-D

Question72:-Edible part in pomegranate

- A:-Seed
- B:-Ovary
- C:-Thalamus
- D:-Aril

Correct Answer:- Option-D

Question73:-Vitamin C content in Amla/Aonla (mg/100g)

- A:-5000
- B:-1000
- C:-500
- D:-100

Correct Answer:- Option-C

Question74:-Cox's Oragne is variety of

- A:-Mandarine orange
- B:-Sweet orange
- C:-Pummello
- D:-Apple

Correct Answer:- Option-A

Question75:-Cold treatment applied to apple seeds for germination is known

- A:-Chilling
- B:-Scarification
- C:-Stratification
- D:-All of the above

Correct Answer:- Option-C

Question76:-Anti-nutrient present in the Brassica group of vegetables

- A:-Glucosides
- B:-Thio glucosides
- C:-Allayil Thiocyanate
- D:-Both 1 and 2

Correct Answer:- Option-B

Question77:-Most ancient type of vegetable garden

- A:-Kitchen garden
- B:-Market garden
- C:-Truck garden
- D:-Both 1 and 2

Correct Answer:- Option-A

Question78:-Photosensitive variety of cowpea

- A:-Lola
- B:-Bhagyalekshmi
- C:-Anaswara
- D:-Kanakamony

Correct Answer:- Option-D

Question79:-Blossom end rot in tomato fruit is associated with the deficiency of

- A:-Boron
- B:-Sulphur
- C:-Calcium
- D:-Magnesium

Correct Answer:- Option-C

Question80:-Best season for cultivation of all vegetables in Kerala

- A:-September to March

B:- June to September

C:- January to May

D:- All of the above

Correct Answer:- Option-A

Question81:-The downward sloping demand curve is based on which of the following law?

A:- Law of supply

B:- Law of equi-marginal utility

C:- Law of diminishing marginal utility

D:- Law of diminishing marginal product

Correct Answer:- Option-C

Question82:-Which of the following statement is/are correct about the Minimum Support Price?

- (i) It is recommended by the Commission for Agricultural Costs and Prices and announced by the Government of India.
- (ii) It is recommended and announced by the Commission for Agricultural Costs and Prices.
- (iii) It is announced before the sowing season.
- (iv) It is recommended by the Government of India and announced by the Commission for Agricultural Costs and Prices.

A:- Only (i)

B:- (i) and (iii)

C:- (ii) and (iii)

D:- (iii) and (iv)

Correct Answer:- Option-B

Question83:-In which type of market segmentation, the buyers are divided into different groups on the basis of personality traits, lifestyle or values?

A:- Demographic segmentation

B:- Geographic segmentation

C:- Psychographic segmentation

D:- Behavioural segmentation

Correct Answer:- Option-C

Question84:-Which of the following is a facilitative function in marketing?

A:- Storage

B:- Standardisation

C:- Processing

D:- Selling

Correct Answer:- Option-B

Question85:-Which of the following statement/statements about the relationship between marketed surplus and marketable surplus is/are correct?

- (i) Marketed surplus is greater than marketable surplus.
- (ii) Marketed surplus is less than marketable surplus.
- (iii) Marketed surplus is equal to marketable surplus.

A:- Only (ii)

B:- (ii) and (iii)

C:- (i) and (ii)

D:- (i), (ii) and (iii)

Correct Answer:- Option-D

Question86:-The minimum of the average variable cost is known as the

A:- Break-even point

B:- Equilibrium point

C:- Inflection point

D:- Shut down point

Correct Answer:- Option-D

Question87:-Which one of the following market structures has product differentiation as the most important characteristic feature?

A:- Perfect competition

B:- Oligopoly

C:- Monopoly

D:- Monopolistic competition

Correct Answer:- Option-D

Question88:-An increase in price of a commodity, holding everything else constant, results in,

- A:-An increase in demand
  - B:-A decrease in demand
  - C:-A contraction of demand
  - D:-An extension of demand
- Correct Answer:- Option-C

Question89:-The pricing strategy in which the initial prices are kept high and are slowly lowered over time to extract maximum profits from customers who are less price sensitive is called as

- A:-Market skimming pricing
  - B:-Market penetration pricing
  - C:-Markup pricing
  - D:-Target return pricing
- Correct Answer:- Option-A

Question90:-The demand for agricultural inputs like fertilizers or pesticides is known as

- A:-Autonomous demand
  - B:-Derived demand
  - C:-Cross demand
  - D:-Intermediate demand
- Correct Answer:- Option-B

Question91:-Which of the following is not a step of Extension programme planning?

- A:-Planned Programme
  - B:-Plan of work
  - C:-Goal fixation
  - D:-Evaluation of accomplishments
- Correct Answer:- Option-C

Question92:-Function of Extension management includes which of the following?

- A:-Good Vision
  - B:-Good Organizing
  - C:-Good Supervision
  - D:-Good Motivation
- Correct Answer:- Option-B

Question93:-Need for introducing High Yielding Variety Programme (HYVP) was felt due to limitation of which programme?

- A:-Institute village Linkage programme (IVLP)
  - B:-Watershed Development Programme
  - C:-National Agricultural Technology programme (NATP)
  - D:-Intensive Agricultural District Programme (IADP)
- Correct Answer:- Option-D

Question94:-Which is the major dissimilarity between Community Development Programme and Extension Education?

- A:-Social and economic development
  - B:-Individual approach
  - C:-Bringing about change
  - D:-Extend knowledge to rural people
- Correct Answer:- Option-B

Question95:-In Extension Programme planning 'Establishment of relationship' is focused on which function?

- A:-Organising
  - B:-Staffing
  - C:-Coordinating
  - D:-Controlling
- Correct Answer:- Option-A

Question96:-Evaluation carried out by the agency responsible for the planning and implementation of the programme is known as

- A:-Self evaluation
  - B:-External evaluation
  - C:-Internal evaluation
  - D:-Institutional evaluation
- Correct Answer:- Option-C

Question97:-Conflict between groups due to psychological differences is known as

- A:-Class conflict
  - B:-International conflict
  - C:-Caste conflict
  - D:-Racial conflict
- Correct Answer:- Option-D

Question98:-'Method demonstration' is which method of communication?

- A:-Individual communication
  - B:-Mass communication
  - C:-Group communication
  - D:-Farm communication
- Correct Answer:- Option-C

Question99:-Faithful performance of all the element of communication is called?

- A:-Communication competency
  - B:-Fidelity
  - C:-Empathy
  - D:-Feedback in communication
- Correct Answer:- Option-B

Question100:-Which type of entrepreneurs prefer to continue in the same venture by transforming themselves to fit the changing demands?

- A:-Managerial entrepreneur
  - B:-Innovative entrepreneur
  - C:-Mobile entrepreneur
  - D:-Empire builders
- Correct Answer:- Option-A