

PROVISIONAL ANSWER KEY

Question 145/2023/OL

Paper Code:

Category 489/2021

Code:

Exam: Soil Survey Officer/ Research Assistant/ Cartographer/
Technical Assistant (NCA- SC)

Date of Test 24-08-2023

Department Soil Survey and Soil Conservation

Question1:-Which of the following micronutrients cause "White bud" in sorghum when deficient in soil

A:-Fe

B:-Zn

C:-Cu

D:-Mn

Correct Answer:- Option-B

Question2:-Which among the following is not a short duration cassava variety

A:-Sree Vijaya

B:-Kalpaka

C:-Nidhi

D:-Sree Harsha

Correct Answer:- Option-D

Question3:-Which of the following is more complex in precision farming due to spatial and temporal variation

A:-Precision management of Nitrogen

B:-Precision management of Phosphorus

C:-Precision management of Potassium

D:-Precision management of Lime

Correct Answer:- Option-A

Question4:-The principle behind Coimbatore Method of composting is

A:-Anaerobic decomposition followed by hot fermentation

B:-Anaerobic degradation followed by aerobic process

C:-Aerobic process only

D:-Anaerobic process only

Correct Answer:- Option-B

Question5:-Which of the following is a measure of light interception efficiency of leaf?

A:-Leaf Area Duration

B:-Leaf-Stem Ratio

C:-Specific Leaf Weight

D:-Extinction Coefficient

Correct Answer:- Option-D

Question6:-Which of the following is the standard recommended method for calculation of ET_0

A:-FAO Blaney and Criddle formula method

B:-Modified Penman Equation method

C:-FAO Penman-Monteith method

D:-Radiation method

Correct Answer:- Option-C

Question7:-Which of the following is an intermittent irrigation technique in which water is applied to long furrows in on and off irrigation cycles

A:-Surge irrigation

B:-Skip furrow irrigation

C:-Alternate furrow irrigation

D:-Corrugation irrigation

Correct Answer:- Option-A

Question8:-Which of the following nutrient use efficiency is not expressed in terms of yield in relation to nutrient uptake?

(i) Apparent nutrient recovery

(ii) Production efficiency

(iii) Agronomic efficiency

A:-Only (i)

B:-Only (ii)

C:-Only (iii)

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

Correct Answer:- Option-C

Question9:-Which crop requires "blossom showers" for flowering and fruit set?

A:-Coffee

B:-Mango

C:-Cacao

D:-Pepper

Correct Answer:- Option-A

Question10:-Which of the following is the product of the Land Equivalent Ratios (LER) of the component crops in an intercropping system

A:-Relative Yield Total

B:-Effective Land Equivalent Ratio

C:-Staple Land Equivalent ratio

D:-Land Equivalent Coefficient

Correct Answer:- Option-D

Question11:-What is the per hectare recommended dose of lime for rice in Kerala?

A:-500 kg ha^{-1}

B:-600 kg ha^{-1}

C:-250 kg ha^{-1}

D:-350 kg ha^{-1}

Correct Answer:- Option-B

Question12:-Which among the following is an amide fertilizer?

A:-Ammonium Sulphate

B:-Calcium Ammonium Nitrate

C:-Ammonium Phosphate

D:-Urea

Correct Answer:- Option-D

Question13:-In which of the following crops the relation between plant population and yield is asymptotic?

A:-Rice

B:-Groundnut

C:-Hybrid Napier

D:-Red gram

Correct Answer:- Option-C

Question14:-Which among the following is not a conservation tillage practice?

A:-Zero tillage

B:-Clean tillage

C:-Strip tillage

D:-Ridge tillage

Correct Answer:- Option-B

Question15:-What should be the C:N ratio of the organic materials for the net release of nitrogen in mineralisation process?

A:-Between 20 and 30

B:-Between 30 and 50

C:-Less than 20

D:-More than 50

Correct Answer:- Option-C

Question16:-Which of the following is correct regarding IFFCO Nano urea liquid

A:-Nano urea contains 40% total N (w/v)

B:-Nano particle size varies from 120-150 nm

C:-The innovative product was designed in Kalol, Gujarat, at IFFCO's Nano Biotechnology Research Center (NBRC)

D:-1 bottle (500 ml) of nano urea can replace 4 bags of conventional urea of 45 kg

Correct Answer:- Option-C

Question17:-Site specific integrated nutrient management adopts the use of

A:-GPS

B:-GIS

C:-Remote sensing

D:-All the above

Correct Answer:- Option-D

Question18:-Surface runoff of rain water represents the portion of the water supply to the surface that is

A:-That runs down the slope

B:-Not retained in the surface

C:-Not absorbed by the soil

D:-All of the above

Correct Answer:- Option-D

Question19:-Maximum damage due to sheet erosion is in

A:-Red and alluvial soils

B:-Red and black soils

C:-Red and laterite soils

D:-Black and alluvial soils

Correct Answer:- Option-B

Question20:-NAVIC full form is

A:-Indian regional navigation satellite system

B:-Navigation with Indian constellation

C:-Navy based armed forces Indian constellation

D:-National aeronautical vehicle instrumentation committee

Correct Answer:- Option-B

Question21:-When the yield of a crop is 25 to 50% normal, then the drought condition is called

A:-Moderate drought

B:-Severe drought

C:-Disastrous drought

D:-Drought

Correct Answer:- Option-B

Question22:-Crop residue application is a component in

A:-Integrated nutrient management

B:-Conservation tillage

C:-Organic farming

D:-All the above

Correct Answer:- Option-D

Question23:-Slushy soils found in lowlands of Chittoor taluk is known as

A:-Lowland soils of palakkad central plain

B:-Poonthalpadams

C:-Upland soils of palakkad central plain

D:-Plateau of Palakkad

Correct Answer:- Option-B

Question24:-What is the ration of growing erosion permitting and erosion resisting crops?

A:-4:1

B:-2:1

C:-1:1

D:-10:1

Correct Answer:- Option-B

Question25:-The term agrostology in soil erosion is use of

A:-Grasses

B:-Trees

C:-Legumes

D:-Stones

Correct Answer:- Option-A

Question26:-Nano sensors work based on the principle of measuring sensor material changes in

A:-Electrical

B:-Mechanical

C:-Chemical

D:-Magnetic

Correct Answer:- Option-A

Question27:-Micro watershed has an area of

A:-1000-10000 ha

B:-100-1000 ha

C:-1-100 ha

D:-> 10000 ha

Correct Answer:- Option-B

Question28:-In the USLE equation of soil erosion, the value of P ranges from

A:-1-5

B:-1-3

C:-0-3

D:-0-1

Correct Answer:- Option-D

Question29:-Buffer strips works well when the vegetation growth is

A:-Dense at ground level

B:-Sparsely spread at ground level

C:-Minimum at ground level

D:-Dense at upper level

Correct Answer:- Option-A

Question30:-Minimum satellites necessary to determine the position precisely in GPS is

A:-3

B:-4

C:-5

D:-7

Correct Answer:- Option-B

Question31:-The natural method of soil erosion management with fastest growing grass is

A:-Tall fescue

B:-Rye grass

C:-Vetiver

D:-Bermuda grass

Correct Answer:- Option-D

Question32:-Precision agriculture is a type of farming in which we consider

A:-Hybrid seeds and varietal improvement

B:-Crop production under controlled conditions

C:-Spatial and temporal variability management

D:-Crop quality improvement

Correct Answer:- Option-C

Question33:-The method of contour farming in which planting of crops in a field is taken

A:-Across the contour lines

B:-Along the contour lines

C:-In straight rows

D:-In paired rows

Correct Answer:- Option-B

Question34:-The major objectives in watershed development programmes are

A:-Livestock development

B:-Increase in irrigated area

C:-Development of natural resources

D:-All of the above

Correct Answer:- Option-D

Question35:-The size of particles by surface creep in wind erosion is

A:-0.3-0.5 mm

B:-1-2 mm

C:-0.5-1 mm

D:-0.5-2 mm

Correct Answer:- Option-C

Question36:-Pick out the anticoagulant type of rodenticide from the following

A:-Bromadiolone

B:-Zinc phosphide

C:-Warfarin

D:-Coumatetralyl

Correct Answer:- Option-B

Question37:-An insect parasitoid which is not that of coconut leaf eating caterpillar

A:-Trichogramma chilonis

B:-Bracon brevicornis

C:-Goniozuz nephantidis

D:-Trichospilus pupivora

Correct Answer:- Option-A

Question38:-Which of the following is a diamide insecticide?

A:-Thiamethoxam

B:-Malathion

C:-Acetamiprid

D:-Flubendiamide

Correct Answer:- Option-D

Question39:-Insect pheromones are secretions of

A:-Endocrine glands

B:-Neurosecretory cells

C:-Exocrine glands

D:-Prothoracic glands

Correct Answer:- Option-C

Question40:-Field and storage products can be infested by one and the same pest which of the following does not fall under this category?

A:-Potato tuber moth

B:-Paddy stem borer

C:-Pulse beetle

D:-Sweet potato weevil

Correct Answer:- Option-B

Question41:-Which of the following is not a host plant of Coried bug of coconut?

A:-Arecanut

B:-Guava

C:-Sugarcane

D:-Neem

Correct Answer:- Option-C

Question42:-Locate from the following an insect which is not a true locust

A:-Patanga Succincta

B:-Aularches miliaris

C:-Locusta migratoria

D:-Schistocerca gregaria

Correct Answer:- Option-B

Question43:-A key pest is a pest with the following population levels

A:-GEP is close to EIL or equal to EIL

B:-GEP is below EIL and DB

C:-GEP is well above EIL and DB

D:-GEP is negligible usually, but rises at certain environmental conditions

Correct Answer:- Option-C

Question44:-Select the insecticide which has fumigant action

A:-Aluminium phosphide

B:-Malathion

C:-Carbaryl

D:-Quinalphos

Correct Answer:- Option-A

Question45:-With regard to plant disease transmission by insect vectors, which of the following terms are applicable

- (i) Accidental association
- (ii) Casual association
- (iii) Obligatory association
- (iv) Intimate association
- (v) Symbiotic association

A:-Only (i), (ii) and (v)

B:-Only (i), (iii) and (v)

C:-Only (i), (iv) and (v)

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

Correct Answer:- Option-D

Question46:-India has witnessed insect pest invasions of

- (i) Erythrina gall wasp , coffee berry borer and Coconut Eriophyid mite
- (ii) Papaya mealy bug, Cassava mealybug and Rugose spiralling white fly
- (iii) Rugose spiralling whitefly, Rice stem borer and Rhinoceros beetle
- (iv) Coconut root grub, Rhinoceros beetle and Rugose spiralling whitefly
- (v) Lotus lilly midge, Eucalyptus gall wasp and Cassava mealybug

A:-Only (i), (iii) and (V)

B:-Only (i), (ii) and (iii)

C:-Only (i), (ii) and (V)

D:-Only (ii), (iv) and (V)

Correct Answer:- Option-C

Question47:-The casual organism of brown spot of rice that caused the Great Bengal Famine is

A:-*Dreschlera Oryzae*

B:-*Helminthosporium Oryzae*

C:-*Sarocladium oryzae*

D:-*Pyricularia oryzae*

Correct Answer:- Option-A

Question48:-Virulence of a pathogen may be stated as

A:-Genetic capability to cause disease

B:-Genetic ability to overcome host resistance

C:- Genetic ability to tolerate the pathogen and its activities

D:-Genetic ability to reproduce and maintain the parasitic life

Correct Answer:- Option-A

Question49:-Black rot of cabbage is caused by

A:-*Xanthomonas axonopodis*

B:-*Xanthomonas campestris*

C:-*Xanthomonas citri*

D:-*Xanthomonas oryzae*

Correct Answer:- Option-B

Question50:-The most appropriate non chemical field technology that controls soil borne pathogens, weeds and soil borne pests is

A:-Tillage

B:-Balanced nutrition

C:-Organic soil amendment

D:-Soil solarisation

Correct Answer:- Option-D

Question51:-Panama disease of banana is caused by

A:-*Fusarium oxysporum* f.sp. *cubense*

B:-*Fusarium equiseti*

C:-*Fusarium pallidoroseum*

D:-*Fusarium semisectum*

Correct Answer:- Option-A

Question52:-The insect vector of tomato leaf curl virus is

A:-*Bemisia tabaci*

B:-*Aphis gossypii*

C:-*Myzus persicae*

D:-*Aphis craccivora*

Correct Answer:- Option-A

Question53:-Which of the following technique can be used to improve a microbial bioagent

A:-Protoplast fusion

B:-Radiation

C:-Gene transformation

D:-All the above

Correct Answer:- Option-D

Question54:-The first group of systemic fungicides discovered and introduced for plant disease control

A:-Oxathiins

B:-Benzimidazoles

C:-Pyrimidines

D:-Triazoles

Correct Answer:- Option-A

Question55:-Choose the most appropriate answer in the case of slow wilt of pepper

- (i) Nematode and Fusarium sp
- (ii) Diplodia sp and Rhizoctonia sp
- (iii) Rhizoctonia sp and Nematode

A:-All the above (i), (ii) and (iii)

B:-Only (i) and (ii)

C:-Only (ii) and (iii)

D:-Only (i) and (iii)

Correct Answer:- Option-A

Question56:-An orthodox seed is one which can

A:-Tolerate dehydration and low temperature

B:-Tolerate low temperature but not dehydration

C:-Tolerate dehydration but not low temperature

D:-Doesn't tolerate either

Correct Answer:- Option-A

Question57:-White eye colour in fruit fly is X-linked and recessive to red eye. If white eyed females are crossed to red eyed males, what proportion female progenies will be white eyed?

A:-100%

B:-75%

C:-50%

D:-0%

Correct Answer:- Option-D

Question58:-Genes for CMS are inherited through

A:-cytoplasmic mRNA

B:-maternal organelles

C:-maternal nucleus

D:-paternal nucleus

Correct Answer:- Option-B

Question59:-The first hybrid derivative, high yielding, early and dwarf rice of South East Asia which was released in 1966

A:-Annapoorna (PTB 35)

B:-Padma

C:-Jaya

D:-Jyothi

Correct Answer:- Option-A

Question60:-The test required for granting protection under PPV & FRA, 2001

A:-VCU

B:-GOT

C:-DUS

D:-FDA

Correct Answer:- Option-C

Question61:-In a hybrid seed production programme, which of the sentence below is correct with respect to B line?

A:-the line which do not have fertility restoring genes and used as female parent

B:-the line which do not have fertility restoring genes and used as male parent

C:-the line which have fertility restoring genes and used as male parent

D:-the line which have fertility restoring genes and used as female parent

Correct Answer:- Option-B

Question62:-For producing Kerasree hybrid seedling in coconut pollen is collected from

A:-West Coast Tall

B:-East Coast Tall

C:-Malayan Green Dwarf

D:-Malayan Yellow Dwarf

Correct Answer:- Option-D

Question63:-Which is the correct sentence

(i) Colchicine treatment produces autopolyploidy in crops

(ii) Protoplast fusion of heterokaryons produces autopolyploidy in crops

(iii) Protoplast fusion of homokaryons produces autopolyploidy in crops

A:-Only (i) and (ii)

B:-Only (i) and (iii)

C:-Only (ii) and (iii)

D:-All three methods (i, ii and iii)

Correct Answer:- Option-B

Question64:-Rubber is a native of

A:-Ethiopia

B:-Western Ghats

C:-Africa

D:-Brazil

Correct Answer:- Option-D

Question65:-Principle of TZ test for seed viability is

A:-TTC is a coloured dye absorbed by living cell

B:-TTC is a coloured dye absorbed by non-living cell

C:-TTC is oxidised to form a coloured compound in living cell

D:-TTC is reduced to form a coloured compound in living cell

Correct Answer:- Option-D

Question66:-Ideal type of cucurbits suitable for planting in a polyhouse is

A:-Andromonoecious lines

B:-Gynoecious lines with parthenocarpy

C:-Gynomonoecious lines

D:-Monoecious lines

Correct Answer:- Option-B

Question67:-The seeds showing glyoxylate cycle are predominantly rich in

A:-Carbohydrates

B:-Organic acids

C:-Lipids

D:-Proteins

Correct Answer:- Option-C

Question68:-Method to induce site specific mutations include

A:-rDNA technique

B:-Biolistic technique

C:-Mutagen treatment

D:-CRISPR/cas9 system

Correct Answer:- Option-D

Question69:-This is commonly known as a rooting hormone

A:-IBA

B:-BA

C:-Kinetin

D:-ABA

Correct Answer:- Option-A

Question70:-The type of mutation induced by base analogues is

A:-Base alteration

B:-Base substitution

C:-Base deletion

D:-Base insertion

Correct Answer:- Option-B

Question71:-Arka chandan is a variety of

A:-Pumpkin

B:-Luffa

C:-Bottle gourd

D:-Bitter gourd

Correct Answer:- Option-A

Question72:-In onion the yellow colour of outer skin is due to

A:-Anthocyanin

B:-Carotene

C:-Quercetin

D:-Lycopene

Correct Answer:- Option-C

Question73:-Molecular marker system used to test the hybridity of F1 hybrid?

A:-RAPD

B:-AFLP

C:-SSR

D:-SCAR

Correct Answer:- Option-C

Question74:-GURT stands for

A:-Genetic Use Restriction Technology

B:-Genetic Use Recombination Technology

C:-Genetic Uniformity Reassurance Technology

D:-Genome Uniformity Restriction Technology

Correct Answer:- Option-A

Question75:-VHT is a method used in mango before export to prevent damage from

A:-Mealy bug

B:-Scales

C:-Fruit fly

D:-Mould

Correct Answer:- Option-C

Question76:-Which of the following statement is correct as per Seed Act, 1966

A:-Seed certification and labelling are compulsory

B:-Seed certification is voluntary, labelling is compulsory

C:-Seed certification and labelling are voluntary

D:-Seed certification is compulsory, labelling is voluntary

Correct Answer:- Option-B

Question77:-Chemical which is a positive regulator of dormancy induction and a negative regulator of germination

A:-Brassinosteroids

B:-Gibberllic acid

C:-Abscisic acid

D:-None of the above

Correct Answer:- Option-C

Question78:-With reference to artificial seed production methods, which among the statements is true?

(i) Somatic embryos are hardened prior to encapsulation using appropriate growth medium

(ii) In a desciccated system, polyethylene (PE) is used to coat somatic embryo

(iii) The most common gelling agent used to produce artificial seeds is sodium alginate with

complexing agent as calcium salts.

A:-Only (iii)

B:-Both (i) and (ii)

C:-Both (i) and (iii)

D:-Both (ii) and (iii)

Correct Answer:- Option-C

Question79:-Which is the sexually sterile diploid crop

A:-Onion

B:-Garlic

C:-Beet

D:-Potato

Correct Answer:- Option-B

Question80:-Thanjavur wilt is found in

A:-Coconut

B:-Arecanut

C:-Cocoa

D:-Coffee

Correct Answer:- Option-A

Question81:-Which among the following is called a double cross hybrid

A:- $(A \times B) \times (C \times D)$

B:- $(A \times B) \times C$

C:- $A \times (B \times C)$

D:- $A \times OPV \times B$

Correct Answer:- Option-A

Question82:-Mango variety suitable for high density planting

A:-Amrapali

B:-Sindhu

C:-Ratna

D:-Alphonso

Correct Answer:- Option-A

Question83:-National Biodiversity Authority (NBA) is located at

A:-New Delhi

B:-Mumbai

C:-Kolkata

D:-Chennai

Correct Answer:- Option-D

Question84:-Biggest producer of organic tea with GI

A:-Darjeeling

B:-Nilgiri

C:-Sikkim

D:-Assam

Correct Answer:- Option-A

Question85:-An extant variety is

A:-Farmer's variety

B:-Notified as per seed act, 1966

C:-Variety about which there is common knowledge

D:-All the above

Correct Answer:- Option-D

Question86:-Two products are said to be _____, when increase or decrease in the level of one result in decrease or increase in the level of production of another, given the fixed amount of resources.

A:-Complementary

B:-Competitive

C:-Supplementary

D:-None of these

Correct Answer:- Option-B

Question87:-_____ is the price at which the commodities are made available to the consumers at fair price shops.

A:-Levy price

B:-Ceiling price

C:-Issue price

D:-Minimum support price

Correct Answer:- Option-C

Question88:-As the _____ increases, the borrower runs a greater risk of losing

owned capital

A:-Credit ratio

B:-Debit ratio

C:-Statutory liquidity ratio

D:-Debt-equity ratio

Correct Answer:- Option-D

Question89:- _____ examines the behaviour of output, when all inputs are varied at the same time.

A:-Economies of scale

B:-Returns to scale

C:-Diseconomies of scale

D:-None of these

Correct Answer:- Option-B

Question90:- _____ is the major disadvantages of partnership.

A:-Unlimited liability

B:-Limited liability

C:-No liability

D:-None of these

Correct Answer:- Option-A

Question91:-The optimum theory of population was developed by

A:-Sidgwick

B:-Adam Smith

C:-Edwin Cannon

D:-None of these

Correct Answer:- Option-C

Question92:-Social costs are also called as _____

A:-Real costs

B:-Opportunity costs

C:-Separable costs

D:-Externalities

Correct Answer:- Option-D

Question93:-Which of the method is used to solve linear programming problem?

A:-Graphical method

B:-Simplex method

C:-Both of these

D:-None of these

Correct Answer:- Option-C

Question94:-In Amortised decreasing repayment plan, _____ component remains constant over the entire repayment period while the _____ part decreases continuously.

A:-Interest, principal

B:-Principal, interest

C:-Both

D:-None of these

Correct Answer:- Option-B

Question95:-The phrase "Find Raiffeissen" is associated with

A:-Political and religious neutrality

B:-Co-operative movement

C:-Both

D:-None of these

Correct Answer:- Option-B

Question96:-Risk is quantified using

A:-Weighted averages

B:-Probabilities

C:-Percentages

D:-All of these

Correct Answer:- Option-D

Question97:-Co-operative credit structure in India for short-term and medium-term loans comes under

A:-Three-tier structure

B:-Two-tier structure

C:-Both

D:-None of these

Correct Answer:- Option-A

Question98:-Expand DICGC

A:-District Industrial Cooperative group committee

B:-Deposit Insurance and credit guarantee corporation of India

C:-Direct and indirect credit group committee

D:-None of these

Correct Answer:- Option-B

Question99:-_____ is a process of transacting the goods or financial obligation that assumes risks in the hope of favourable price movements.

A:-Gambling

B:-Hedging

C:-Speculation

D:-None of these

Correct Answer:- Option-C

Question100:-There are _____ number of regulated markets in Kerala.

A:-1

B:-2

C:-3

D:-None of these

Correct Answer:- Option-D