



Previous Year Paper

HPSC ADO

• Question No. 1

Which of the following is an example of electroneutral pump?

Options :

1. $H^+-PPase$
2. $H^+-ATPase$
3. $Ca^{+2} -ATPase$
4. $H^+/K^+ -ATPase$

Answer : $H^+/K^+ -ATPase$

• Question No. 2

A drought year as a whole is defined by the Indian Meteorological Department (IMD) as a year in which, the overall rainfall deficiency is more than 10 percent of

Options :

1. short period average value
2. long period average value
3. seasonal period average value
4. half yearly average value

Answer : long period average value

• Question No. 3

H^+ -ATPases of plasma membrane and tonoplast are

Options :

1. same
2. different
3. not known
4. None of the above

Answer : different

• Question No. 4

Oceanic Nino Index corresponding to El Nino period is

Options :

1. greater or equal to 0.5°C
2. greater or equal to -0.5°C
3. greater or equal to 5°C
4. greater or equal to -5°C

Answer : greater or equal to 0.5°C

• Question No. 5

Phytosiderophores have high affinity to

Options :

1. Fe^{+2}
2. Fe^{+3}
3. Both [A] and [B]
4. None of the above

Answer : Fe^{+3}

• Question No. 6

In which wavelength range, the greenhouse gases absorb energy?

Options :

1. 0.3 to $3\text{ }\mu\text{m}$
2. 5 to $100\text{ }\mu\text{m}$
3. 100 to $500\text{ }\mu\text{m}$
4. 400 to 700 nm

Answer : 5 to $100\text{ }\mu\text{m}$

• Question No. 7

Chlorophyll is formed from proto- chlorophyll in light. The proto- chlorophyll lacks two hydrogen atoms one each at _____ and _____ carbon of _____ ring.

Options :

1. 8th, 9th, I
2. 7th, 8th, IV
3. 8th, 9th, IV
4. 7th, 8th, I

Answer : 7th, 8th, IV

• Question No. 8

Tensiometer is suitable for which type of soil?

Options :

1. Clay soil
2. Sandy soil
3. Loamy soil
4. Laterite soil

Answer : Sandy soil

• Question No. 9

NADP-Me type C4 pathway is found in

Options :

1. sugarcane and maize
2. Panicum maximum
3. Atriplex and Amaranthus
4. Portulaca

Answer : sugarcane and maize

• Question No. 10

Parthenium hysterophorus is

Options :

1. C3 plant
2. C4 plant
3. C3 and C4 plants
4. CAM plant

Answer : C3 and C4 plants

- Question No. 11

Inulin is a polymer of

Options :

1. glucose
2. fructose
3. pentose
4. galactose

Answer : fructose

- Question No. 12

What is the Water Use Efficiency (WUE) of rice if the grain yield is 6000 kg/hectare with evapotranspiration of 950 mm?

Options :

1. 631 ha.mm
2. 6.31 ha.mm
3. 63.1 ha.mm
4. 0.631 ha.mm

Answer : 6.31 ha.mm

- Question No. 13

Which of the following act(s) as strong germinator for parasitic weeds?

Options :

1. Strigolactones
2. ABA
3. Both (A] and [B]
4. Temperature and pressure

Answer : Strigolactones

- Question No. 14

The ratio of land required by pure crop to produce the same yield as that of intercrop is known as

Options :

1. CEY
2. CLUI
3. LER
4. MCI

Answer : LER

• Question No. 15

Clay soil contains which type of pores to a large extent?

Options :

1. Capillary pore
2. Coarse pore
3. Medium pore
4. Macro pore

Answer : Capillary pore

• Question No. 16

The plantlet that is produced through clonal propagation is termed as

Options :

1. seedling
2. sapling
3. ramet
4. ortet

Answer : ramet

• Question No. 17

Cropping pattern is referred to the

Options :

1. maximum area covered particular crop with a particular season and particular area
2. minimum area covered particular crop with a particular season and particular area
3. growing of crops in different sequences
4. growing of Crops in intercropping and mixed cropping sequences

Answer : growing of crops in different sequences

• Question No. 18

Calculate the basal area per hectare if the number of tallied trees was 14 and the Basal Area Factor (BAF) of the wedge prism used is three.

Options :

1. 42 m²
2. 14 m²
3. 21 m²
4. 28 m²

Answer : 42 m²

• Question No. 19

The term used in watershed management, time of concentration refers to

Options :

1. The drop of water travelled from most remote area of watershed to the common drainage point to the most remote area of watershed
2. The drop of water travelled from common drainage point to the most remote area of watershed
3. The drop of water travelled from most middle area of watershed to the common drainage point
4. None of the above

Answer : The drop of water travelled from most remote area of watershed to the common drainage point to the most remote area of watershed

• Question No. 20

Salai gum is obtained from which tree species?

Options :

1. Boswellia serrata
2. Sterculia urens
3. Anogeissus latifolia
4. Lannea coromandelica

Answer : Boswellia serrata

• Question No. 21

Fertigation system of irrigation is the

Options :

1. supply of only water to the Crop
2. supply of both water and nutrients to the crop
3. supply of only nutrient to the crop
4. None of the above

Answer : supply of both water and nutrients to the crop

• Question No. 22

Soil moisture tension is directly measured by

Options :

1. V notch
2. current meter
3. Parshall flume
4. Tensiometer

Answer : Tensiometer

• Question No. 23

In watershed management, use of Ridge Line' is referred to the

Options :

1. dividing line of two watershed areas
2. drainage line of two watershed areas
3. valley line of two watershed areas

4. imaginary line of two watershed areas

Answer : dividing line of two watershed areas

• Question No. 24

What is meant by Moisture Equivalent?

Options :

1. Percent of water a soil can retain in opposition to a centrifugal force 10 times that of gravity
2. Percent of water a soil can retain in opposition to a centrifugal force 100 times that of gravity
3. Percent of water a soil can retain in opposition to a centrifugal force 1000 times that of gravity
4. Percent of water a soil can retain in opposition to a centrifugal force 10000 times that of gravity

Answer : Percent of water a soil can retain in opposition to a centrifugal force 1000 times that of gravity

• Question No. 25

Lysimeter is used for measurement of

Options :

1. Transpiration
2. Water flow
3. Evapotranspiration
4. Evaporation

Answer : Evapotranspiration

• Question No. 26

What is/are the effects of heavy metals on soil?

Options :

1. Heavy metals like Cd, Pb, Hg, As and Ni affect the microbial processes in soil
2. It creates phytotoxicity on plants

3. High concentrations of heavy metals affect the nutrient balance
4. All of the above

Answer : All of the above

• Question No. 27

Cycocel (CCC) is a

Options :

1. growth promoter
2. growth inhibitor
3. growth regulator
4. None of the above

Answer : growth inhibitor

• Question No. 28

Fertiliser is defined as

Options :

1. Inorganic material with a definite chemical composition and high analytical value that supplies one or more plant nutrients in plant available form
2. Organic material with a definite chemical composition and high analytical value that supplies one or more plant nutrients in plant available form
3. Inorganic material with no definite chemical composition and high analytical value that supplies one or more plant nutrients in plant available form
4. Inorganic material with a definite chemical composition and low analytical value that supplies one or more plant nutrients in plant available form

Answer : Inorganic material with a definite chemical composition and low analytical value that supplies one or more plant nutrients in plant available form

• Question No. 29

Khaira disease of rice is due to

Options :

1. Fe deficiency
2. Mn deficiency
3. sulphur deficiency
4. zinc deficiency

Answer : zinc deficiency

• Question No. 30

Which among the following is/are organic P containing compound(s) of soil?

Options :

1. Inositol phosphate
2. Phospholipids
3. Nucleic acids
4. All of the above

Answer : All of the above

• Question No. 31

The trade name of Alachlor is

Options :

1. Machete
2. Stomp
3. Lasso
4. Basalin

Answer : Lasso

• Question No. 32

Joint forest management concept was first implemented at

Options :

1. Jabalpur
2. Ayyalur
3. Arabari
4. Jhansi

Answer : Arabari

- Question No. 33

Which weed is called MAMA' of wheat crop?

Options :

1. Phalaris minor
2. Chenopodium album
3. Cyperus rotundus
4. Echinochloa colona

Answer : Phalaris minor

- Question No. 34

If the drainage coefficient is 3 cm/day, then the flow rate through drains of watershed of area 1500 hectares is

Options :

1. 0.2 m³/s
2. 0.5 m³/s
3. 2 m³/s
4. 5.2 m³/s

Answer : 5.2 m³/s

- Question No. 35

In waterlogged lands

Options :

1. The soil pores are saturated within a depth of 1 m
2. The soil pores are saturated within a depth of 60 m
3. The soil pores are saturated within a depth of 40 m
4. The soil pores are saturated up to the root zone of the crop

Answer : The soil pores are saturated up to the root zone of the crop

- Question No. 36

Which sub-surface drainage system consists of laterals that enter the main drain at an angle, generally from both sides?

Options :

1. Random
2. Herringbone
3. Interceptor
4. Gridiron

Answer : Herringbone

• Question No. 37

The presence of excess salt in the soil requires

Options :

1. high water storage efficiency
2. low water storage efficiency
3. high water application efficiency
4. low water use efficiency

Answer : high water storage efficiency

• Question No. 38

Pusa Surya Mango cultivar is selected from

Options :

1. Eldon
2. Brooks
3. Haden
4. Golden Nuggets

Answer : Eldon

• Question No. 39

Plantation of high water consuming trees for withdrawal of groundwater is termed as

Options :

1. mole drainage
2. interceptor drains
3. bio-drainage
4. surface drainage

Answer : bio-drainage

• Question No. 40

Splash Erosion is otherwise called as

Options :

1. rain drop erosion
2. sheet erosion
3. rill erosion
4. gully erosion

Answer : rain drop erosion

• Question No. 41

Who among the following is popularly known as the Father of Agricultural Demonstration?

Options :

1. Paul Leagans
2. Seaman A. Knapp
3. Edger Dale
4. Auguste Comte

Answer : Seaman A. Knapp

• Question No. 42

The Marginal Physical Product (MPP) is maximum corresponding to the

Options :

1. input price and output price ratio
2. Total Physical Product (TPP)
3. Average Physical Product (APP)
4. point of inflection

Answer : point of inflection

• Question No. 43

Which of the following is a cultivar of custard apple?

Options :

1. Balanagar
2. Jayanagar
3. Vijayanagar
4. All of the above

Answer : Balanagar

• Question No. 44

Tagetes patula marigold is also known as

Options :

1. African Marigold
2. French Marigold
3. Signet Marigold
4. Brazil Marigold

Answer : French Marigold

• Question No. 45

A subdivision on the basis of some important deviations such as surface texture, erosion, slope and stoniness is called as

Options :

1. soil phase
2. soil series
3. soil family
4. soil order

Answer : soil phase

- Question No. 46

Ceteris paribus means

Options :

1. proportionate change in all variables
2. small change in all other variables
3. same proportionate change, in variables
4. keeping other things constant

Answer : keeping other things constant

- Question No. 47

H⁺ and Al³⁺ ions present in non-exchangeable form with organic matter and silicate clays and aluminum hydroxyl ions account for

Options :

1. active acidity
2. reserve acidity
3. exchangeable acidity
4. non-exchangeable acidity

Answer : reserve acidity

- Question No. 48

According to Thomas Robert Malthus, population tends to grow in

Options :

1. geometric progression
2. arithmetic progression
3. ever increasing rate
4. increasing and decreasing rate

Answer : geometric progression

- Question No. 49

In paracentric inversion, rearrangement of genes

Options :

1. involves both the arms of a chromosome
2. is confined to single arm of a chromosome
3. involves the exchange of telomere ends of a chromosome
4. involves the centromere part of a chromosome

Answer : is confined to single arm of a chromosome

• Question No. 50

The National Agricultural Extension Policy was announced by the Government of India during which year?

Options :

1. 2000
2. 2003
3. 2011
4. 2014

Answer : 2000

• Question No. 51

Azospirillum lipoferum is reported to be associated with the roots of

Options :

1. Rice
2. Potato
3. Pigeon pea
4. Maize

Answer : Maize

• Question No. 52

Training and visit system is mainly known for

Options :

1. bottom-up planning of extension activities
2. systematic training and scheduled visits

3. decentralized extension approach
4. farmer friend

Answer : systematic training and scheduled visits

• Question No. 53

The rhizosphere effect can be quantitatively represented by

Options :

1. C: N ratio
2. R: S ratio
3. C:P ratio
4. O: C ratio

Answer : R: S ratio

• Question No. 54

The art of training plants into different shapes is known as

Options :

1. shrubbery
2. topiary
3. skirting
4. propping

Answer : topiary

• Question No. 55

For determination of soil microbial biomass, carbon extracting agent used is

Options :

1. silver sulphate
2. sodium sulphate
3. potassium sulphate
4. ammonium sulphate

Answer : potassium sulphate

• Question No. 56

The mixture of breeding lines having the same genetic constitution, but differing at a specific locus is known as

Options :

1. iso parental lines
2. doubled haploid lines
3. multi-lines
4. recombinant inbred lines

Answer : multi-lines

• Question No. 57

Critical level for hot water extractable B (ppm) in soil is

Options :

1. 0-1-2-0
2. 2-0-5-0
3. 5-0-10-0
4. 10-0-15-0

Answer : 0-1-2-0

• Question No. 58

The product of pedigree selection is

Options :

1. homozygous and homogeneous
2. homozygous and heterogeneous
3. heterozygous and homogeneous
4. heterozygous and heterogeneous

Answer : homozygous and homogeneous

• Question No. 59

The CITES was signed in the year

Options :

1. 1972
2. 1971
3. 1973
4. 1974

Answer : 1973

• Question No. 60

In gametophytic self-incompatibility system, when sib matings are carried out, the crosses are

Options :

1. Fully compatible, compatible or incompatible partially fully
2. always fully compatible
3. fully compatible or partially compatible
4. always partially compatible

Answer : fully compatible or partially compatible

• Question No. 61

Prosopis cinerea and Cenchrus ciliaris are good fodder tree + grass combination for

Options :

1. semi-arid climate with red soil
2. temperate climate
3. arid climate with sandy soil
4. semi-arid black cotton soil

Answer : arid climate with sandy soil

• Question No. 62

The type of germplasm, which is frequently utilized by breeders for their crop improvement programme, is called as

Options :

1. base collection
2. active collection
3. long-term collection
4. working collection

Answer : working collection

• Question No. 63

Typical nitrogen deficiency symptoms in crop plants under high nitrogen content is due to the deficiency of

Options :

1. Mo
2. B
3. Zn
4. Mn

Answer : Mo

• Question No. 64

The type of recurrent selection that uses homozygous tester is known as

Options :

1. simple recurrent selection
2. recurrent selection for SCA
3. recurrent selection for GCA
4. reciprocal recurrent selection

Answer : recurrent selection for SCA

• Question No. 65

Organic acids developed from organic matter decomposition act as chelating agent may be

Options :

1. abscisic acids
2. gibberellic acids
3. mercuric acids

4. amino acids

Answer : amino acids

• Question No. 66

Tempering in seed drying refers to

Options :

1. equilibrium moisture content
2. moisture gradient
3. moisture vapour pressure
4. small pause between stages of drying

Answer : small pause between stages of drying

• Question No. 67

The Chargaff's rule (1: 1 stoichiometric ratio of purine and pyrimidine bases) is not followed in organisms having as genetic material.

Options :

1. dsDNA
2. dsRNA
3. ssRNA
4. dsDNA: RNA hybrid

Answer : ssRNA

• Question No. 68

Under which condition the hybrid seeds produced should be compulsorily subjected to grow out test for grant of certificate?

Options :

1. The seed crop raised under modified isolation distance
2. The seed crop raised without following the prescribed planting ratio
3. Hybrid seeds produced through application of chemical hybridizing agents
4. The certification officer is not satisfied with the field standards

Answer : Hybrid seeds produced through application of chemical hybridizing agents

• Question No. 69

Chemicals that have been implicated in attraction of rhizobia are

Options :

1. peptides
2. organic acids
3. flavonoids
4. sugars

Answer : flavonoids

• Question No. 70

Among the following, under which condition for maize hybrid seed production, the modification of isolation distance by planting border rows is not permitted?

Options :

1. Seed field having diagonal exposure to contaminating field
2. if two hybrid seed fields with different pollinator parents are within the isolation distance of one another
3. If the contaminating field is planted with sweetcorn, popcorn or teosinte
4. Border rows planted with male parent

Answer : If the contaminating field is planted with sweetcorn, popcorn or teosinte

• Question No. 71

In the G1 phase of cell cycle, each chromosome has chromatid(s).

Options :

1. 1
2. 2
3. 3
4. 4

Answer : 1

• Question No. 72

In the ATP-driven proton potassium exchange mechanism, the H^+ ions are formed due to dissociation of

Options :

1. oxaloacetic
2. acid pyruvic acid
3. malic acid
4. phosphoglycolic acid

Answer : malic acid

• Question No. 73

Compounds which disrupts hormone balance and protein synthesis by which the plant ultimately dies are

Options :

1. plant growth regulators
2. pigment inhibitors
3. seedling growth inhibitors
4. amino acid synthesis regulators

Answer : seedling growth inhibitors

• Question No. 73

In CRISPR-Cas9 technology, the RNA designed to find and bind to a specific sequence in the DNA, is known as

Options :

1. ScRNA
2. UIRNA
3. mRNA
4. gRNA

Answer : gRNA

• Question No. 74

The recently developed training system in grapes is called as

Options :

1. Y-trellis
2. cardon
3. telephone
4. knifing

Answer : Y-trellis

• Question No. 75

In rice, assume that a recessive gene "a" is responsible for resistance to BLB. This gene is present on chromosome #1. A monosomic resistant line for chromosome #1 is crossed with normal susceptible line. The phenotype of F1 plants will be

Options :

1. all plants resistant
2. all plants susceptible
3. 50% plants resistant and 50% plants susceptible
4. 75% plants resistant and 25% plants susceptible

Answer : 50% plants resistant and 50% plants susceptible

• Question No. 76

Nernst equation allows us to make certain predictions about

Options :

1. Equilibrium concentrations of ions inside the cell when ion transport is due to facilitated diffusion
2. Equilibrium concentrations of ions inside the cell when ion transport is due to ion transport
3. Equilibrium concentrations of ions outside the cell when ion transport is due to ion transport
4. Equilibrium concentrations of ions outside the cell when ion transport is due to facilitated diffusion

Answer : Equilibrium concentrations of ions inside the cell when ion transport is due to facilitated diffusion

• Question No. 77

The estimate of degree of variation in a phenotypic trait in a population that is due to genetic variation between individuals in that population is called as

Options :

1. Expressivity
2. Penetrance
3. Pleiotropy
4. Heritability

Answer : Heritability

• Question No. 78

The unit of spectral energy fluence rate is

Options :

1. $\text{mol m}^{-2} \text{g}^{-1}$
2. $\text{W m}^{-2} \text{nm}^{-1}$
3. $\text{mol photon m}^{-2} \text{s}^{-2} \text{nm}^{-1}$
4. $\text{Jm}^{-2} \text{s}^{-1}$

Answer : $\text{W m}^{-2} \text{nm}^{-1}$

• Question No. 79

The marker systems Restriction Fragment Length Polymorphism (RFLP), Diversity Array Technology (DArT), Single-Feature Polymorphism (SFP) and Restriction-site-Associated DNA (RAD) are detected by

Options :

1. DNA: DNA hybridization
2. DNA: RNA hybridization
3. PCR followed by electrophoresis
4. real time PCR

Answer : DNA: DNA hybridization

• Question No. 80

Which among the following statements is true about Gibberellin (GA)?

Options :

1. GAs are tetraterpenoids synthesized from jasmonic acid pathway
2. GAs are diterpenoids synthesized from MVA
3. GAs are tetraterpenoids synthesized from MVA
4. GAs are diterpenoids synthesized from jasmonic acid pathway

Answer : GAs are diterpenoids synthesized from MVA

• Question No. 81

Once incorporated into the plant genome, the gene product, CP4 EPSP synthase, confers crop resistance to

Options :

1. glyphosate
2. 2,4-D
3. atrazine
4. thifensulfuron

Answer : glyphosate

• Question No. 82

The Government of India in 1997 launched the Targeted Public Distribution System (TPDS) to benefit about _____ poor families.

Options :

1. 4 crore
2. 5 crore
3. 6 crore
4. 7 crore

Answer : 6 crore

• Question No. 84

Cuttings of black pepper are raised mainly from

Options :

1. plagiotropes

2. geotropes
3. runner shoots
4. orthotropes

Answer : runner shoots

• Question No. 85

Aflatoxin is a

Options :

1. pathotoxin
2. mycotoxin
3. vivotoxin
4. phytoalexin

Answer : mycotoxin

• Question No. 86

Krishi Vigyan Kendras are one of the largest networks for scientific dissemination of agricultural technologies to the end users financially supported by

Options :

1. the State Government
2. the Ministry of Agriculture and Farmers Welfare
3. ICAR
4. ICFA

Answer : ICAR

• Question No. 87

In which year the National Food Security Act was passed?

Options :

1. 2013
2. 2014
3. 2015
4. 2016

Answer : 2013

- Question No. 88

Which is a system of supervised control of diseases and pests in winter wheat?

Options :

1. EPIPE
2. BLITECAST
3. SimCast
4. PhytoPRE

Answer : EPIPE

- Question No. 89

When a disease is more or less constantly prevalent in a locality year after year in a moderate to severe form, it is known as

Options :

1. Endemic disease
2. Epidemic disease
3. Pandemic disease
4. Sporadic disease

Answer : Endemic disease

- Question No. 90

The United Nations Assembly declared as the International Year of Fruits and Vegetables.

Options :

1. 2021
2. 2015
3. 2018
4. 2020

Answer : 2021

- Question No. 91

The Destructive Insects and Pests Act (1914) is related to

Options :

1. biodiversity
2. environmental protection
3. plant quarantine
4. forest protection

Answer : plant quarantine

• Question No. 92

The "Antyodaya Anna Yojana" (AAY) was launched in December, 2000 for _____ poorest of the poor families among BPL covered under TPDS.

Options :

1. 4 crore
2. 3 crore
3. 2 crore
4. 1 crore

Answer : 1 crore

• Question No. 93

Which one of the following is not a mode of action of biocontrol agents?

Options :

1. Competition
2. Lysis
3. Antibiosis
4. RNA interference

Answer : RNA interference

• Question No. 94

Which agenda of SDGs of UN addresses zero hunger?

Options :

1. 11
2. 02
3. 07
4. 17

Answer : 02

• Question No. 95

Blitecast' is a forecasting model for

Options :

1. blister blight of tea
2. bacterial blight of rice
3. late blight of potato
4. turcicum corn blight

Answer : late blight of potato

• Question No. 96

Transfer of agricultural technologies to the farmers is done by KVKs located in zones of the country.

Options :

1. 722 and 11
2. 702 and 07
3. 711 and 08
4. 675 and 09

Answer : 722 and 11

• Question No. 97

Science dealing with the outbreak and spread of disease in a population is called as

Options :

1. Etiology
2. Epidemiology
3. Pathology

4. None of the above

Answer : Epidemiology

• Question No. 98

CIBRC is responsible for registration of

Options :

1. bio-pesticides
2. insecticides
3. fungicides
4. All of the above

Answer : All of the above

• Question No. 99

World free of hunger malnutrition is who's vision?

Options :

1. WHO
2. FAO
3. IFPRI
4. None of the above

Answer : IFPRI

• Question No. 100

Which is the most widespread form of malnutrition among preschool children in India?

Options :

1. Vitamin A deficiency
2. Iron deficiency anaemia
3. Protein (PEM) Energy Malnutrition
4. Iodine deficiency

Answer : Protein (PEM) Energy Malnutrition

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