GRE AGRONOMY Helping Material

Subject Related MCQs

The plants growing out of their proper place

Relative plants

Weeds

Absolute weeds

Similar weeds

Some weeds actively eliminate competition by producing toxins that enter the soil and prevent the normal growth of other plants this phenomenon known as

Pathology

Physiology

Allelopathy

Alopathy

Weeds cannot be controlled by applying fertilizer by

Side dressing

Broadcasting

Band placement

Both A and C

Method which completely removes weed plans is called

Preventative method

Chemical method

Eradication

Integrated method of weed control

Which method/approach is the best desirable for weed control

Preventative method

Chemical method

Eradication

Integrated method of weed control

Chemicals which are used to kill insects are called

Herbicides

Insecticides

Bactericides

None of the above

_____ herbicides can kill all kinds of weeds.

Selective

Non-selective

Random

Straight

Which of the following weed has close morphological resemblance with wheat

It sit

Bhakrha

Jangli palak

None of above

Which of the following is not a rabi weed

Dumbi sitti

Jangli jai

Lehli

Itsit

……have deep root system

Annual weeds

Biennial weeds

Perennial weeds

None of above

Morphological resemblance of weeds with crops is called…

Blunt

Agitation

Mimicry

None of above

Economical crop plants growing out of their proper place

Relative plants

Rouge

Absolute weeds

Similar weeds

Weeds can be controlled by applying fertilizer by

Side dressing

Broadcasting

Band placement

Both A and C

Method which avoid the emergence of weed plans is called

Preventative method

Chemical method

Eradication

Integrated method of weed control

Which method/approach is the best desirable for weed control

Preventative method

Chemical method

Eradication

Integrated method of weed control

Growing different crops each year to control weeds is called

Mono cropping

Crop rotation

Relay cropping

All of the above

Chemicals which are used to kill weeds are called

Herbicides

Insecticides

Bactericides

None of the above

ANSWER: A

_____ herbicides can kill all kinds of weeds.

Selective

Non-selective

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……have deep root system

Annual weeds

Biennial weeds

Perennial weeds

None of above

All types of weeds can be used for making compost.

True

False

Conditional

None of above

Seeds cannot germinate even if immediate conditions are right. This form of dormancy delays germination until season, or other macro-environmental issues are right for survival.

Primary dormancy

Secondary dormancy

Tertiary dormancy

None of above

Seeds cannot germinate due to limitation of any germination factor is called….

Primary dormancy

Secondary dormancy

Tertiary dormancy

None of above

Mature embryo is called……..

Seed

Fruit

Grain

None of above

Seed can be stored at moisture of……

3-8%

15-20%

30-35%

None of above

Seed dormancy supports…..

Seedling survival

Seed bank

Synchronizes germination with seasons

All of above

Seed dormancy can be broken by…..

Hot water treatment

Cold water treatment

Scratching the seed coat

All of above

Cover crops can reduce…

Soil fertility

Soil erosion

Soil microorganism

None of above

Crop crops should be…

Exhaustive crops

Nitrogen fixing crop

Short statured crop

None of above

Following crops are important for green manuring…

Wheat

Berseem clover

Sugarcane

All of above

A chemical without which plant cannot complete its specific function is called…

Nutrient

Essential nutrient

Non-essential nutrient

All of above

…….is a micronutrient

Nitrogen

Phosphorus

Potassium

Zinc

……is a mobile fertilizer.

Nitrogen

Phosphorus

Potassium

All of above

…….is a compound fertilizer.

DAP

MAP

NP

All of above

Nutrient use efficiency can be enhanced by

Proper method of application

Mechanical method

Proper time of need

All of above

One bag of Ammonium sulphate contains……nitrogen.

5.5 kg

10.5 kg

15.5 kg

All of above

Nitrogen can be applied in split in …

Long duration crops

Vegetables

Orchards

All of above

Crop…….. is the water required by the plants for its survival, growth, development and to produce economic parts

Water requirement

Delta of water

Duty of water

None of above

……..can affect the water requirement of crop

Root system

Leaf shape

Organic matter

All of above

……can affect the selection of irrigation method

Soil factor

Crop factor

Water supply

All of above

…….can affect the water use efficiency.

Fertilizers

Land leveling

Crop type

All of above

Drip irrigation is more suitable for….

Unlevelled area

Desert area

Hilli area

All of above

The lowest water use efficiency is in

Flood irrigation

Drip irrigation

Sprinkler irrigation

All of above

In…….crop is incorporated at immature stage in soil.

Green manuring

Brown manuring

Animal manuring

All of above

Efficiency of leguminous crops depends on--------

Type of crop species

Type of soil

Weather conditions

All above

The most frequently used vigor test for range of crops especially storability prediction:

Electrical conductivity test

TZ test

Accelerated aging test

Cold test

Two most important factors that affect seed quality are:

Oxygen & Light

CO_2 & temperature

Temperature and RH

All

The most authenticated seed testing organization in the world is:

ISTA

AOSA

CASA

PSA

The ideal seed moisture contents (%) for safe storage of most seed species are:

18-45

45-60

10-13

0-4

Major form of carbohydrates in plant seeds are:

Pectin

Mucilage

Hemicellulose

Starch

Seed quality can be revived by:

Magnetic seed stimulation

Seed priming

Seed coating

All of these

The technology which improves plantability by shape of seed is not changed

Seed pelleting

Seed coating

Seed agglomeration

Both A & B

The ideal pH for growing media should be:

6-7.5

7.5-80

8-8.5

8.5-9

The most effective storage for germplasm conservation:

Cryogenic

Hermetic

Conditioned

Containerized

During hermetic storage:

O_2 depleted

CO_2 enriched

H2O depleted

Both a & b

The most applicable thumb rule for seed storage is:

Harington's Rule

James 'Rule

Bradford's metronome rule

Ellis Rule

Epigeal stand establishment occurs in:

Wheat

Cotton

Rice

All of these

The key hormone responsible for reserve mobilization in seeds is:

ABA

GA

Cytokinin

Ethylene

The matric potential of dry seed is very low which is --------- MPa:

-1000

-100

-10

Zero

---------- have little effect on imbibition:

Starches and sugars

Starches and lipids

Proteins and sugars

All of these

The duration of phase II (germination *sensu stricto*) is dependent on:

Temperature

Water potential

Oxygen

Both a & b

The enzyme which is already present in starchy endosperm and needs activation is:

β-Amylase

α –glucosidase

α –amylase

Protease

Food plant with similarly starchy seeds but which belongs to other plant family is:

Buckwheat

Quinoa

amaranth

All of these

Sunflower seed is called:

Achene

Caryopsis

Siliqua

Grain

The major storage proteins of monocots are:

Albumins

Globulins

Prolamins

Glutelins

Hypogeal stand establishment is the characteristic of:

Soybean

Cotton

Wheat

Pea

The ideal moisture for seed storage of cereal crops is:

10 %

12%

14%

18%

The initial uptake of water by a dry seed from the surrounding medium is called:

Imbibition

Germination

Emergence

Dormancy

The pressure exerted due to the presence of ionic and non-ionic solutes is called:

Osmotic potential

Pressure potential

Matric Potential

Water Potential

Hormone responsible for seed dormancy is:

GA_3

ABA

Cytokinin

Both b & c

The components of seeds are:

Embryo

Food store

Seed coat

All of these

In cereals, starch is abundantly stored in:

Seed coat

Embryo

Endosperm

Aleurone layer

60-95% assimilates are:

Carbon

Nitrogen

Phosphorus

None of these

Those seeds cannot be stored for longer period of time by reducing moisture up to 5% are called as:

Recalcitrant

Orthodox

Intermediate

None of these

The example of C_3 plants is:

Wheat

Cotton

Rice

All of these

Nutrient availability is generally favoured at pH range:

5.5-6.5

6.5-7.5

7.5-8.5

8.5-9.5

--------- is required as cofactor for more than 40 enzymes:

K

Ca

Zn

Mn

About 34% storage protein is present in:

Soybean

Groundnut

Chickpea

Pea

Maintain seeds at safe moisture levels in airtight containers is called:

Conditioned storage

Cryogenic storage

Hermetic storage

Containerized Storage

During grain filling period in wheat, ear and awns contribute upto:

5-10%

15-30%

90-100%

Negligible

Which of the followings contains the highest protein contents

Pigeon pea

Soybean

Green gram

Black gram

Inherent capacity of soil to supply nutrients in balanced form is called

Soil fertility

Soil productivity

Fertility Index

Productivity Index

Injury caused by relatively low temperature above the freezing points is

Freezing injury

Mechanical injury

Dehydration injury

Chilling injury

Iron deficiency usually occurs in soil in the pH range of

5.5 - 6.5

7.4 - 8.5

3.0 - 4.5

4.5 - 5.5

Late planting of autumn sugarcane reduces the germination due to

Short day

Frost

Low temperature

High humidity

Major source of water used by the plants is

Capillary water

Hygroscopic water

Gravitational water

Inter space water

Maximum amount of fertilizers is used in

Wheat

Paddy

Potato

Sugarcane

Mycorrhiza it a symbiotic association between

Bacteria and roots of higher plants

Algae and roots of higher plants

Fungi and roots of higher plants

Protozoa and roots of higher plant

Name a cereal with maximum protein content

Rice

Sorghum

Maize

Whole wheat

Name the kharif season fodder crop

Oats

Lucerne

Sorghum

Berseem

Nitrogen is taken by the plants in the form of

Chloride

Oxide

Nitrate

None of the above

One acre is equivalent to

0.603 ha

0.040 ha

0.404 ha

1.8 ha

Potato belongs to the family

Solanaceae

Compositeae

Poaceae

Euphorbiaceae

Safflower is a _____ season crop

Dry

Summer

Arid

Cool

Soybean is a

Short day plant

Long day plant

Day-neutral plant

All of the above

The best soil for potato cultivation is

Sandy loam

Loamy sand

Clay loam

Silky loam

Which disease occur most in groundnut

Blast

Tikka

Blight

Damping-off

Weed competition in rice is more in the

Transplanted crop

Direct seeded crop

Flooded crop

Crop sown in rows

Photorespiration is the characteristic of

C3 plants

C4 plants

CAM plants

None of the above

Marginal product is ratio of

Input-Output

Output-Input

Cost-Income

Price-Income

-------- is known as king of fodders

Alfalfa

Berseem

Jantar

Sorghum

Rouging is a removal of

Weeds

Off-type plants

Promising plants

healthy plants

Soils irrigated by tube well water only face the deficiency of--------

Phosphorus

Nitrogen

Potash

Sodium

Wheat is -------- in nature

Xerophytic

Hydrophytic

Mesophytic

None of the above

Radiation responsible for global warming is

Infrared

Ultraviolet

Gamma

None of these

Gossypium hirsutum is the botanical name of

Desi cotton

American cotton

Egyptian cotton

combed cotton

Conveyance losses account for _____ of water delivered into a canal

40-50%

20-25%

20-50%

15-40%

The full expansion of NADP is

Nicotinamide adenine diphosphate

Nicotinamide adenosine diphosphate

Nicotinamide adenine dinucleotide phosphate

Nicotinamide adenosine dinucleotide phosphate

The internal source of CO_2 in C4 pathway is

Oxaloacetic acid

Mallic acid

RuBP

Phosphoenol pyruvic acid

The chemical substances like phenolics, caumarins, ferulic acid are:

Growth hormones

Growth metabolites

Germination inhibitors

Secondary metabolites

Softening or rupturing of hard seed coat for breaking dormancy is called

Certification

Vernalization

Stratification

Scarification

The part of root involved in water absorption is

Zone of cell division

Zone of root hairs

Zone of elongation

Zone of root cap

Murate of potash is

K_2SO_4

KCl

K_2HPO_4

KNO_3

Azotobacter fixes atmospheric nitrogen in the soil by

Symbiotically

Non-symbiotically

Both (a) and (b)

None of these

Sorghum inflorescence is called as

Spike

Panicle

Spadix

Cymose

Soil structure can be improved with the addition of

Urea

Ammonium sulphate

Organic matter

None of these

Humidity is measured with the help of

Anemometer

Psychrometer

Thermometer

None of these

The practice of covering the soil with crop residue is called

Sheet erosion

Tillage

Mulching

None of these

The vector of cotton leaf curl virus in Pakistan is

Jassid

Aphid

White fly

None of these

Water use efficiency is

Yield/ET

Yield/EF

ET/Yield

None of the above

Hard seeds are those which have seed coat impervious to

Water

Water and oxygen

Oxygen

Light

Which of the following crop has hypogeal mode of germination.

Chickpea

Mungbean

Lentil

None of the above

Fertilizer pollution may be avoided by

Balanced application

Split application

Nitrification inhibitors

All of the above

Which of the following enzyme is not involved in the process of germination

β-Amylase

Lipase

α- Amylase

Catalase

BARI-2011 is a cultivar of

Lentil

Chickpea

Wheat

Peanut

A collective term for the leaves of a plant is called

Fodder

Forage

Foliage

leaflet

Form of water present in the soil which does not move with gravity

Gravitational water

Hygroscopic water

Capillary water

All of above

The reduced sample obtained from submitted sample is called

Gross sample

Working sample

Reduced sample

Test sample

Ability of weeds to withstand extremes conditions in nature and hence continue to associate with the field crops is

Weed dormancy

Weed resistance

Weed persistence

Weed spectrum

Which is not a self-pollinated crop?

Brassica

Rice

Barley

Soybean

Agriculture is derived from two _____ words.

English

Latin

Greek

French

_____ deals with growing of fruit plants.

Landscape horticulture

Pomology

Agronomy

Forestry

Total barani area in Pakistan is _____mha.

5

10

17

22

_____ is the problem of irrigated areas.

Soil erosion

Water logging

High soil fertility

All of the above

_____ is the example of Zaid Rabi crop.

Tobacco

Toria

Lentil

Wheat

Zaid Kharif season starts from_____.

April-May

October-November

August-September

January-February

Condition of atmosphere that changes time by time is called_____.

Climate

Weather

Microclimate

Atmosphere

Fogy and snowy weather throughout the year is the characteristic of _____.

Temperate climate

Polar climate

Tropical climate

Marine climate

The efficiency of _____ rainfall is high for crop production.

Winter

Summer

Monsoon

None of these

Optimum temperature for cotton photosynthesis is _____°C.

43

33

40

25

Desert vegetation derives its water requirements from _____.

Underground water table

Hail and snow

Snow and frost

Fog and mist

Among precipitation sources, _____ is the most important source of water.

Hailing

Snow fall

Dew

Rainfall

Agronomy is derived from two _____ words.

English

Latin

Greek

French

_____ deals with growing of vegetables.

Olericulture

Pomology

Sericulture

Floriculture

Difference between potential and national average yield is called_____.

Average yield

Breeding yield

Yield gap

All of these

Kharif season starts from_____.

April-May

October-November.

August-September

January-February

Climate of field or small area is called_____.

Climate

Weather

Microclimate

Atmosphere

High temperature along with high humidity is the characteristics of _____.

Temperate climate

Tropical climate

Sub-tropical climate

Polar climate

Temperature _____ when we move away from equator.

Increases

Decreases

Remains constant

None of these

_____ damages the new growing tips and fodder crops.

Frost

Fog

Mist

Rainfall

Optimum temperature for wheat growth is _____°C.

25

30

35

15

HNO_3, which is brought to earth in rains, causes soil pH to _____.

Decrease

Remain unchanged

Increase

None of these

_____ has role in chlorophyll synthesis, leaf expansion and in growth of plants.

Light

Temperature

Humidity

All of these

Dhaincha and Senji are the green manure crops of

Rabi season

Kharif season

Both Rabi and Kharif seasons

Zaid Rabi season

Application of fertilizer by broadcast method in standing/growing crop is called

Top dressing

Side dressing

Band placement

None of the above

One of the major problems which reduces crop yield in agriculture is

Insect and disease attack

Inadequate nutrient application

Inadequate plant population

Both a and b

Tillage operations that deal with seed bed preparation are called as

Secondary tillage

Primary tillage

Both A & B

Conservation tillage

The nutrient which is mostly influenced by adsorption is

Potassium

Phosphorous

Nitrogen

Both A & C

Which of the following crops require soil preparation up to greater depth?

Cotton

Sunflower

Sugarcane

Both A & C

Water conservation in water scarce areas can be improved through

Deep ploughing

Growing of drought tolerant crops

Proper use of fertilizers

Adequate seed rate

Leguminous crops require

More nitrogen

More phosphorous

Less nitrogen

Both B & C

In barani areas or where there is water shortage which form of nitrogen will give best results

Ammonium nitrate

Ammonium sulphate

Urea

All of a,b and c

Agronomic research is largely in the

Green house

Laboratory

Field

All of a,b and c

The application of various sciences i.e. botany, plant physiology, entomology, plant pathology, biochemistry, genetics, ecology and soils constitute the field of

Fundamental sciences

Agronomy

Agriculture

All of a,b and c

Cereal seeds can be stored for a period of four years if seed moisture contents are reduced to

6 to 8%

8 to 10%

4 to 6%

12 to 14%

Fertilizer contributes to increase crop yield upto

30%

40%

50%

60%

An agronomist is engaged in _____.

Theory of field crop production

Practice of field crop production

Soil management

All of above

Seed produced from breeder seed on large scale is called _____.

Pre-basic seed

Basic seed

Certified seed

Approved seed

In barani areas the sowing time mainly depends upon

Soil

Crop

Rainfall

All of a,b and c

The seed moisture contents at the time of storage should be

6%

10%

15%

20%

SSP is _____ fertilizer

Compound

Complex

Organic

Straight

Physical condition of soil in relation to plant growth is called

Tilth

Tillage

Ploughing

Harrowing

Seed is ripened _____.

Ovule

Ovary

Plumule

Radicle

Fallow cultivation is also called---------.

Primary tillage

Secondary tillage

Zero tillage

Reduced tillage

The objective of tillage is to----------.

Breaking of hard pan

Controlling weeds

Separate diseased seeds

Both a & b

One tonne of fresh organic manure produce ------kg of organic matter

280 kg

227 kg

330 kg

445 kg

Organic matter in our soils is

>5%

<5%

>1%

<1%

The attack of sucking insects on cotton crop can be reduced if resistant varieties have _____ leaves.

Succulent leaves

Green leaves

Rough and hairy leaves

Lush green leaves

The growing of moth in cotton as inter/mix crop can reduce the _____ attack in cotton.

Stem canker

Charcoal rot

Root rot

None of the above

The insecticides which are absorbed through roots and are effective for the control of borers are called_____.

Carbamate

Pyrethroid

Chlorinated hydrocarbons

Organophosphate

_____ is the alternate host weed of pink bollworm in cotton.

Sonchal

Lehli

Karund

Dodhak

Dumbi sitti problem in wheat can be minimized by growing _____ as an alternate crop.

Berseem

Gram

Lentil

Both berseem and gram

More than two-thirdof absorbed radiations by leaves only increase _____ which ultimately reduce the water use efficiency (WUE).

Transpiration rate

Photosynthetic rate

Evapotranspiration rate

None of the above

The ability of crop plants to close their stomata due to lower availability of water indicates that water use efficiency (WUE) _____ in those plants.

Increases

Decreases

Unchange

None of the above

In regions of high energy season (warm climate), the water use efficiency (WUE) can be increased by growing_____.

C_3 plants

CAM plants

C_4 plants

Both C_3 and C_4 plants

In areas where there is water scarcity and salt problem, the most advanced method of irrigation application is_____.

Drip irrigation

Sprinkler irrigation

Subsurface irrigation

Furrow irrigation

The scientific crop rotation should be_____according to the economical conditions of the area.

Flexible

Fixed

Narrow

None of the above

_____are the most important physical factors (storage room) which affect the storage or shelf life of stored grains.

Both temperature and humidity

Rodents

Enzymes

Alone temperature

The most important factor/s which contribute/s to post harvest losses is/are_____.

Both improper harvesting and improper storage

Improper storage

Improper harvesting

None of the above

A proper plant to plant and row to row distance in cotton protects the crop from different pests, especially the _____.

Weeds

Nematodes

Sucking insects

Both nematodes and weeds

Early sowing of wheat crop increases the attack of fungal diseases, particularly the_____disease.

Smut

Bent

Root rot

None of the above

The_____insecticides have systemic and non-systemic mode of action and are used against sucking insects.

Carbamate

Pyrethroid

Chlorinated hydrocarbons

Organophosphate

Water use efficiency (WUE) can be increased through_____ tillage.

Mulch

Special

Reduced

None of the above

Water use efficiency (WUE) can be defined as_____.

Y/ET

Y/E

ET/Y

E/Y

In good scientific crop rotation, the nutrition status of soil can be maintained by growing the crops having _____root systems.

Both deep and shallow

Only deep

Only shallow

None of the above

The growing of crops on a piece of land in such a way that soil fertility is least disturbed and pest attack can be minimized is called_____.

Crop rotation

Monoculture

Sequential cropping

None of the above

The crops that fix the atmospheric nitrogen should include in scientific crop rotation after every_____years.

3-5

3-4

4-5

2-3

The storage life of seed is doubled for every _____°C decrease in storage room temperature.

5

1

3

6

Water use efficiency (WUE) can be increased at _____ soil fertility.

Low

High

Medium

Both low and medium

In hilly areas, the irrigation of undulating land and steep slopes is possible through_____.

Contour border irrigation method

Border irrigation method

Basin irrigation method

Furrow irrigation method

The post harvest losses in durable commodities are reported to be_____%.

10

20

30

40

Use of biological, chemical and mechanical methods of pest control is collectively called as_____.

Integrated pest management

Organic pest management

Quarantine measures of pest management

None of the above

The growing of cotton after wheat (cotton-wheat) is the example of _____rotation.

1 year

2 year

3 year

None of the above

Crop harvest management includes

Proper harvesting

Cleaning and drying

Storage

All of these

In areas where there is water scarcity and salt problem, the most advanced method of irrigation application is_____.

Drip irrigation

Sprinkler irrigation

Subsurface irrigation

Furrow irrigation

Varietal purity percentage of the seed should be

100 %

90 %

80 %

70 %

The only difference between furrow irrigation and corrugation irrigation is

Furrows have smaller cross section than corrugation irrigation

Furrows have larger cross section than corrugation irrigation

Furrows have smaller length than corrugation irrigation

No difference

Little seed canary grass (Dumbi sitti) is mostly found in

Wheat crop

Rice crop

Cotton crop

Maize crop

_____ water is lost during field application

25 %

15 %

35 %

45 %

_____ method of irrigation is used in rice field and in salt affected soils

Basin

Border

Furrow

All of above

Mould board plough is the _____ tillage implement.

Primary

Secondary

Tertiary

None of others

Seed lot of large seeded crops should not exceed

10000 kg

20000 kg

30000 kg

40000 kg

The permissible limit of inert matter in rice seed is

1.5%

3%

4.5%

6%

Wet tillage is the example of

Special type of tillage

Primary tillage

Secondary tillage

Off season tillage

The application of irrigation with the help of a channel located at upper reach of field is called _____ irrigation.

Uncontrolled surface irrigation

Sub-surface irrigation

Drip irrigation

Surface irrigation

How many bags of Urea are required for an area of 12 kanals if the recommended dose of nitrogen is 150 kg per acre?

8 bags

10 bags

12 bags

14 bags

How many bags of SOP are required for an area of 1 acre if recommended dose of K is 123 kg per acre?

4 bags

5 bags

6 bags

7 bags

Halophytes are plants that survive to reproduce in environments where the NaCl concentration is

150 mM

≥200 mM

50 mM

100 mM

Cheopodium quinoa belongs to which type of halophytes

Hydro-halophytes

Facultative

Obligate

Glycophytes

Membrane transport proteins for Na influx under salinity stress are

SOS1

AtHKT1

NSCC

Both AtHKT1 and NSCC

Most of the halopytes belong to

Poaceae

Aezoaceae

Cyperaceae

Chenopodiacae

Halophytes constitutes about world flora

4%

3%

2%

1%

Water and nutrient transport pathways across roots are

Apoplast

Symplast

Plasmodesmata

Apoplast and Symplast

Multicellular, more prominent in structure and sunken extending out of epidermis in leaf surface for secretary cells are

Salt bladder

Salt glands

Trichomes

Appendages

Trees and shrubs inhabiting the coasts and rivers of tropical and sub-tropical areas forms

Mangroves

Salt marshes

Deserts

All

Any environmental factor which reduces plant growth and causes physiological changes

Stress

Strain

Injury

Tension

Plant may become adapted to environmental condition through

Evolution

Non-lethal exposure

Herited

All

The phenomenal changes which enable plant to survive and maintain limited growth in response to stress is

Adaptation

Injury

Acclimation

Avoidance

First line of defense against drought is

Decreased leaf area

Deeper root extension

Stomatal closure

Superoxide dismutase (SOD)

Which one explain the drought escape mechanism

Early flowering

Stomatal control of transpiration

Leaf abscission

All

Which plant tissue comprises of 80-90% water

Herbaceous

Woody

Seed

All

Which one is stress hormone

ABA

Ethylene

Cytokinin

GA3

Formation of reactive oxygen species occurs

Chloroplast

Mitochondria

Lysisomes

All

A more convenient and universal method to measure ECe of deionized water to soil is a ……. extract ratio.

1:10

1:5

1:2

1:3

Which one is inert, non-ionic and virtually impermeable molecules used to induce water stress.

GABA

Proline

Potassium

PEG

Major portion of salt affected soils in Pakistan

Saline

Sodic

Saline sodic

All

Mostly crop plants are screened for salinity tolerance using ionic ratio.

Na+/K+

Na+/Cl-

Na+/Ca2+

Ca2+/K+

10 mM NaCl is equal to ECe

1 dSm-1

2 dSm-1

5 dSm-1

10 dSm-1

The ECe at which growth starts to decline in response to increasing salinity

Lethal

Threshold

Critical

Limit

Screening large numbers of genotypes for salinity tolerance under field makes it difficult due to

Soil heterogeneity

Parent material

Erratic rainfall

Soil heterogeneity and erratic rainfall

Temporary rise in temperature usually 10-15°C above ambient is considered

Heat stress

Heat threshold

Heat waves

Heat shock

The characteristics of saline sodic saline are

ECe ≥4 dS m-1, soluble Na+, Cl- and exchangeable Na+

ECe ≥4 dS m-1 and high soluble Na+, Cl-

ECe <4 dS m-1 and exchangeable Na+

ECe ≥4 dS m-1, soluble Na+

The most convenient and appropriate method with control of nutrients supply for salinity experiments

Soil

Nutrient solution

Peat

Sand

Which analytical device is used to measure irrigation water salinity

pH-meter

Flame photometer

Electrical conductivity meter

Ion analyzer

ECe of saturated extract paste provides information about presence of

Total dissolved salts

Total insoluble salts

Exchangeable salts

The store house for toxic ions is

Cytosol

Endoplasmic reticulum

Vacuole

Golgi apparatus

The process which helps plants to maintain turgor, metabolic activities and protect protein structures

Ionic homeostasis

Osmotic adjustment

Antioxidation

Ionic compartmentation

Primary active transport of Na+, K+ and Cl- takes place through

Channels

Carriers

Pumps

Ionic compartmentation

Sea water contains more Na+ on molar basis than K+

10 times

20 times

30 times

50 times

During photoinhibition, light damages photosystem

PSI

PSII

Electron transport chain

ATP synthesis

Despite similar physicochemical properties, which one is accumulated in high concentration in halophytes under salinity

K+

Na+

Ca2+

Cl-

Which one is glycophyte

Arabidopsis

Chenopdium quinoa

Ice plant

Phoenix spp

Phenomenon which changes the solute content and water potential of cells without decrease in turgor

Osmoregulation

Osmotic adjustment

Ionic compartmentalization

Ion balance

Herbaceous plants comprise water contents

5-11%

80-95%

50%

Which vitamin has whole sole physiological role to quench free radical reactions

Vit A

Vit B

Vit C

Vit E

Reactive oxygen species are more active due to

Double electron

Triplet electron

Singlet electron

All

Most of plants cavitate at water potential

1 to -2 MPa

0 to -1 MPa

>-2 MPa

All

Linoleic acid is a

Saturated fatty acid

Enzyme

unsaturated fatty acid

Mono-unsatured fatty acid

Quadratic equation involves following chemical composition in salinity formulation

NaCl, CaCl2, MgSO4, Na2SO4

Only NaCl

NaCl and MgSO4, CaCl2

CaCl2 and MgSO4

The redox cycling of ascorbate in the chloroplast is called

Halliwell-Asada pathway

The ascorbate– glutathione cycle

The glutathione peroxidase cycle

Water-water cycle

Which one act as primary line of defense against oxidative stress

APX

SOD

GLUTATHIONE PEROXIDASE

Catalase

Antioxidants neutralize free radicals by

Chain-breaking mechanism

Removal of ROS initiators

Scavenging mechanism

Chain-breaking mechanism and Removal of ROS initiators

During lipid peroxidation, a hydrogen atom is removed from one of the carbon atoms in the fatty acid chain forming a water molecule and carbon atom with an unpaired electron

O2

H2O2

O2-

OH

Which model explains that indirect effect of osmotic stress of salinity are rapid and reduce shoot growth

Bi-phasic

Tester and Davenport

FORTMEIER and Schubert

None

The transporters involved in Na+ efflux and vacuolar compartmentation

SOS1

NHX1

Both SOS1 and NHX1

NSCC

In dry land farming rainfall (mm) is _____

<800

>800

=800

>1000

In rainfed farming growing season is _____ days

>200

<200

=200

>100

Common constraint in dry land and rain fed farming is---------

Wind and water erosion

Water erosion

Wind erosion

Land sliding

There are three types of Agriculture possible in dry land areas.

Crop production, Agro-forestry, sheep farming

Crop production, Silviculture, sheep farming

Crop production, sheep-goat farming, Agro-forestry

Crop production, Animal Husbandry with pasture management, Agro-forestry

Measures for counteracting aberrant weather are _____

Thinning, urea spray, lifesaving irrigation

Fallow land, thinning, lifesaving irrigation

Thinning, inter tillage, urea spray

Inter tillage, plough up crop, earthing up

Which one is the feature of water shed management program.

Drought resistant crops

Drought tolerant crops

Forestry and development of pasture

Zig zag sowing

Stomata closing type anti Tran spirants is _____

Kaolin

Phenyl mercuric acetate

Hexa decanol

Celite

Agronomic researches must be problem based for dry land agriculture, so the problem areas have been divided into _____

Highly undulating lands

Highly undulating lands and Marginal lands

Highly undulating lands, Marginal lands and Diara land

Highly undulating lands, Marginal lands, Diara land and leveled lands

Agro-forestry is to be termed as an umbrella term which embraces the systems _____

Agro-silviculture

Agro-silviculture, silvi-postoral

Agro silviculture, Silvi-postoral, Agro-silvi postoral and multipurpose forest

Agro silviculture, Silvi-postoral, Agro-silvi postoral and Grasses

Which one is not the aim of Agro-forestry system

Improving soil fertility

Providing protection to crops

Rehabilitating environment

Intercultural management system

Which one is not aberration in the rainfall _____

Commencement of rains may be early or delayed

Prolonged dry spells during southwest monsoon

Rains may terminate earlier than normal or continue beyond normal

Run off of rain water

The adverse effect of moisture stress should be mitigated to avoid total crop failure by

Ratooning/thinning/mulching/weed control/water harvesting

Thinning/mulching/weed control

Thinning/mulching/ water harvesting

Ratooning/thinning

Food crops are grown in alleys formed by hedge rows of trees or shrubs in arable lands is known as

Hedge cropping

Hedge row intercropping

Strip cropping

Row cropping

The term _____ is applicable to all classes of land to generate assured income with minimum risk through efficient use of available resources.

Alley cropping system

Capacity classes system

Alternate land use system

Adopting land system

Which are three types of alley systems

Forage-alley cropping, Forage cum trees, Forage-cum crops

Forage-alley cropping, Forage cum trees, Forage-cum mulch

Forage-alley cropping, Forage cum mulch, Forage cum pole

Forage-alley cropping, Forage cum mulch, Forage cum crops

A rotation system which includes pasture for grazing and conservation is called _____ farming.

Subsistence

Nomadic

Mixed

Sedentary

Agri-silivi-pasture consists of _____

Crops/trees/pasture/animals

Crops/trees

Crops/pasture/animals

Crops/animals/trees

_____ type of water harvesting technique is practiced in light soils where annual rainfall is less than 400 mm

Farm ponds

Inter plot

Micro plot

Inter row

Large area is planted with selected species of trees suitable for fuel, wood or industrial use is called_____

Block culture

Border culture

Compact block culture

Blanded culture

A loose friable, airy, powdery and crumbly condition of soil with optimum moisture content for working and seed germination is called_____.

Tillage

Tilth

Structure

Texture

The deepest operations performed during the period between two crops is_____.

Secondary Tillage

Tertiary Tillage

Primary Tillage

Intercultural Tillage

For reclamation of saline soils ground water should be maintained _____below the soil surface.

2m

4m

< 2m

< 4m

On light sloppy soils, small depressions are formed over the surface of bare fields after a heavy shower of rainfall is termed as_____.

Gully Erosion

Sheet Erosion

Steam Bank Erosion

Rill Erosion

In case of lined canals seepage losses varies from_____.

20-25%

30-35%

40-45%

5-15%

From watersheds of Pakistan _____thousand tons soils per square kilometer is eroded annually.

2-4

1-2

4-5

3-5

The practice of growing different crops in the field in alternate double rows or triple rows is called_____.

Contour Cropping

Strip Cropping

Terrace Farming

None of These

A deterioration of structure leading to more compact and sticky top soil results in soils with groundwater depth is_____.

60 cm

70 cm

< 60 cm

< 70 cm

Waterlogged soil, with approximately _____% moisture requires about _____times more heat to warm up than a dry soil.

40%, 2 times

50%, 2.5 times

60%, 1.5 times

45%, 2 times

A system that receives excess water directly from the farm or fields and conveys it to the main drainage system is_____.

Pipe Drainage

Vertical Drainage

Mole Drainage

Field Drainage

_____ is the quickest method of removing the excess water from deeper depths of soil.

Vertical Drainage

Field Drainage

Mole Drainage

Surface Drainage

The latest system for controlling the high water table is_____.

Mole Drainage

Pipe Drainage

Open Ditch Drains

Vertical Drainage

It is also preferable not to construct contour bunds in shallow soils of _____depth.

7.5 cm

8.5 cm

< 7.5 cm

< 8.5 cm

Small bunds constructed with a slope of_____ in order to dispose the excess water through the graded channels which leads to depressed area.

1.03 to 1.05%

0.5 to 1.0%

0.03 to 0.05 %

0.3 to 0.5%

In clay soils, for a four-hectare farm, the size of farm pound may be _____ with a depth of _____.

25 × 20 m and 3.5 m

20 × 20 m and 3.0 m

20 × 25 m and 2.5 m

25 × 25 m and 2.0 m

For in-situ moisture conservation, the practice of tie ridging can be done at definite interval minimum of _____ and they will act as a barrier.

3.0 m

2.5 m

2.75

2.25 m

In the low rainfall areas dominant rabi crop is_____.

Wheat

Lentil

Gram

Millet

An ideal shelterbelt should have at least _____ percent wind permeability as to avoid the turbulent wind on the other side.

30 to 40

40 to 45

50 to 70

40 to 60

Growing of crops in strips with the aim to control wind and water erosion is practiced on soils having slope of _____%.

1 to 5%

4 to 7 %

7 to 12 %

12 to 15%

Cultivating crops in strips of uniform width across the general slope is called_____.

Field Strip Cropping

Buffer Strip Cropping

Wind Strip Cropping

Contour Strip Cropping

Successive rotation of exhaustive crops requires_____.

Minimum Tillage

Zero Tillage

Extensive Tillage

Intensive Tillage

In light textured soils of arid and semi-arid lands _____ and _____ cause extensive damage to emerging seedlings

White grubs and Termites

Termites and White Fly

White Fly and White grubs

Jassid and Tharips

For irrigated agriculture soil aggregates size_____ are necessary.

< 5 mm

5 mm

< 3 mm

< 2 mm

Tillage operation in which soil is not inverted is_____.

Clean Tillage

Ridge Tillage

Strip Tillage

Subsoil Tillage

All of these implements used for puddling except_____.

Country Plough

Bose Plough

Turn Wrest Plough

Cage Wheel

6.In Punjab dry land farming is practiced in_____.

Sargodha-Sahiwal

Attock- Chakwal

Layyah-Muzaffargarh

Multan-Lodhran

In dry land farming millets and sorghum may be followed by _____.

Wheat

Barley

Maize

Chick pea

_____ area of field is recommended for establishing terraces.

2/3rd

1/4th

1/3rd

1/5th

In soil moisture deficit conditions plants fertilized with _____ increases the ability of water uptake.

Nitrogen

Potassium

Phosphorus

Magnesium

The optimum moisture content for tillage is _____.

60%

50%

70%

40%

Orchard bench terraces are basically narrow benches built on_____.

Medium Slope

Gentle Slope

low Slope

Very Steep Slope

The optimum slopes for bed and furrow system range from_____.

0.3-0.8%

0.03-0.08%

0.5-0.9%

0.05-0.09%

Cropping pattern of Jowar-Oilseeds-Cotton-Wheat is followed in _____.

Rawalpindi Zone

Thal Zone

Gujrat Zone

Multan Zone

In site main-water harvesting techniques are

Contour bonding, vegetative barriers, micro catchments

Contour bonding, vegetative barriers, Intercropping

Contour bonding, Relay cropping, Intercropping

Mixed cropping, Relay cropping, Intercropping

In wind erosion equation K and L stands for

Soil surface roughness and unprotected width of field

Soil surface roughness and protected width of field

Soil surface roughness and slop of field

Vegetative cover and unprotected width of field

Losing _____ cm top soil can reduce wheat yield by _____%

2.5 ---------- 5 to 10

3.5 ---------- 10 to 15

4.5 ---------- 15 to 20

5.5 ---------- 20 to 25

In rains drop erosion the soil particles can jump upto _____

2.5 cm

2.5 ft

2.5 mm

2.5 m

In RUSLE to calculate soil loss by erosion R stands for _____

Erosion control practice

Erodibility of soil

Erosivity of rainfall

Resistance to erosion

Enhancement of per unit area production of crops is also called _____ approach technique

Exhaustive

Progressive

Horizontal

Vertical

Generally FYM contains _____ per tone

20 kg N + 10 kg P_2O_5 + 25 kg K_2O

10 kg N + 16 kg P_2O_5 + 15 kg K_2O

20 kg N + 16 kg P_2O_5 + 30 kg K_2O

10 kg N + 16 kg P_2O_5 + 23 kg K_2O

In band placement method of fertilizers, it can be placed in bands _____ cm to the side and _____ cm below rows of seeds.

10 to 15 _____ 1 to 5

15 to 20 _____ 2 to 7

5 to 7 _____ 3 to 5

1 to 5 _____ 4 to 8

For long duration crops such as sugarcane Nitrogen is applied in _____ splits

2 ------- 3

4 ------- 5

6 ------- 7

8 ------- 9

In cereals, fertilizer use efficiency is measured by

Growth Rate

Relative Growth Rate

Productivity Index

Fresh Weight Index

_____, _____ and _____ are usually made available to plants via cation exchange surfaces of organic material and clay soil surface particles

Ca, Mg, K

Cu, Fe, B

Mn, Zn, K

Mo, cl, Co

Contour binding is done to check

Rill erosion

Gully erosion

Ravine formation

Sheet erosion

When trees and shrubs are planted in long rows along streams, they are described as:

Wind breaks

Soil binders

Shelter belts

Basin blisters

Strip tillage is the example of

Special type of tillage

Primary tillage

Secondary tillage

Off season tillage

Bar harrow is the example of

Primary tillage implements

Secondary tillage implements

Tertiary tillage implements

Special type of tillage implements

Timely sowing of wheat after rice harvesting is possible through

Zero tillage

Conservation tillage

Strip tillage

Minimum tillage

The size of each small plot (Kiari) in basin irrigation system is

1 to 2 kanals

2 to 3 kanals

0.5 to 1 kanals

3 to 4 kanals

The water application in interconnected basins is called

Cascade method of irrigation

Direct method of irrigation

Corrugation irrigation

None of these

Reaper is used for

Crop harvesting

Weed removal

Seed bed preparation

All of above

Corrugation irrigation method is a type of

Basin irrigation

Direct irrigation

Furrow irrigation

Border irrigation

The seeds which are more than the half of its original size are called------

Pure seed

Inert matter

Other crop seed

None of the above

The permissible limit of other crop seed in wheat seed is

0.05%

0.1%

0.2%

0.3%

The water use efficiency (WUE) of _____ irrigation system is maximum.

Uncontrolled surface irrigation

Sub-surface irrigation

Drip irrigation

Surface irrigation

_____ is used to break the hardpan and reduce the compaction of soil.

Chisel plough

Digger

Ridger

Leveller

How many bags of TSP are required for an area of 2 hectares if recommended dose of P is 137 kg per hectare?

12 bags

13 bags

11 bags

14 bags

How many bags of MOP are required for an area of 2 acres if recommended dose of K is 75 kg per acre?

4 bags

5 bags

6 bags

7 bags

Unwanted plant which have some economic importance or desirable characteristics are called

Absolute weeds

Relative weeds

Rogue

None of them

Weeds like_____ in rice have tendency to cause lodging of crop

Jangli jai

Lehli

Didhan

All of these

Any plant or vegetation excluding fungi, interfering with the objectives or requirements of people is called weed, defined by

WSS of America (1967)

WSS of America (1989)

EWRS (1986)

Meriam Webster (2003)

Example of relative weed is

Leh

Chatri dhodak

Jangli palak

Jangli jai

Following are the examples of absolute weeds except

Didhan

Parthenium

Sialkanta

Striga

Under favourable growth conditions Sorghum halepense accumulates

Hydrocyanic acid

Prussic acid

Nitrates

All of these

Sorghum halepense produce _____ as a result of drought

Hydrocyanic acid

Prussic acid

Nitrates

All of these

Aesthetic value of home lawn is reduced by

Didhan

Kasni

Poa grass

None of these

_____ in sorghum cause unpleasant odour to flour

Striga

Orobanche

Krund

None of these

Some weeds also improve the soil fertility by _____ weed is used

Fixing N

Adding organic matter

Adding nutrient

All of these

_____ is used in understanding the mechanism of inheritance

Kahi

Datura

Chlorella

None of these

Sorghum halepense at tillering stage is poisonous to animals because of _____

Hydrocyanic acid

Prussic acid

Nitrates

All of these

All of the weeds with limited life cycles depend on _____ reproduction for their survival

Sexual

Asexual

Sexual and asexual

None of these

C3 weeds require _____ molecules of ATP to synthesize a molecule of glucose

30

24

18

None of these

_____is helpful in reducing soil water erosion

Deela

Khabbal grass

Dumbi citti

All of these

Saccharum spontaneum (Kahi) help in reducing

Wind erosion

Water erosion

Wind and water erosion

None of these

Weeds with cylindrical, hollow stalks or stem like leaves arranged alternatively, cylindrical stems and fibrous roots but some species have rhizomes are called

Narrow leaf weeds

Broad leaf weeds

Rushes

Sedges

Example of biennial weed is _____

Wild carrot

Kasni

Jangli Sarsoon

None of these

Weeds arbitrarily defined by law as more troublesome and difficult to control are_____

Absolute weeds

Relative weeds

Objectionable weeds

Noxious weeds

Weeds like _____ in wheat have tendency to cause lodging of crop

Jangli jai

Lehli

Dumbi citti

All of these

Sorghum halepense (Baru grass) cause objectionable odour to _____ flour

Wheat

Sorghum

Maize

Rice

For reclamation of industrial waste water containing heavy metals_____is valuable

Chenopodium album

Water hyacinth

Hydrilla

Wild mustard

Morphological resemblance of weed with the crop is _____

On-togeny

Mimicry

Association

None of these

Double pre sowing irrigation is applied to control weed before wheat sowing, this technique is called_____

Dab method

False seed bed

Stale seed bed

All of these

In rice-wheat cropping system _____ is a major weed problem in wheat

Dumbi sitti

Jangli Jai

Didhan

None of these

Persistence of dumbi sitti in soil is _____ years

20-25

20

4-5

None of these

Winter annual weeds germinate in

Winter

Summer

Fall

Spring

Summer annual weeds produce seeds in

Winter

Summer

Autumn

Spring

Weeds with thicker root systems, woody stems and underground stems and dormant buds are called

Biennial weeds

Perennial weeds

Annual weeds

Ephemerals

A free floating or anchored aquatic weed adapted to grow with most of its vegetative tissue at or above water surface, Lowering or rising with the water level is called

Floating weeds

Emerged weeds

Submerged weeds

None of them

Striga lutea is_____ on Sorghum, millets, maize, sugarcane

Total root parasite

Partial root parasite

Total stem parasite

Partial stem parasite

Weeds foreign in origin, introduced by man from other countries are called

Anthrophytes

Exotic

Alien

All of these

Native or indigenous weeds found in wild and sometimes in cultivated area of a country are called

Anthrophytes

Apophytes

Facultative weeds

Apophytes and facultative

_____ require bright sunlight conditions for their growth and development

Sociophytes

Heliophytes

Basophiles

All of these

_____ weeds occur only in cultivated land, cannot compete with volunteer weeds in a closed community

Obligate

Facultative

Absolute

None of these

Extent to which weed growth is desired to be limited is largely depends on _____

Cost of weed control

Benefits anticipated from the operation

Use of integrated weed management

All of these

Which process is the most advantageous in case of weed prevention on a farmer's field?

Crop management practices

Use of weed free crop seed

Keeping vigilance

Seed certification and weed laws

The main objective of _____ is to leave minimum space for weeds

Increase in crop density

Increase seed rate

Inter cropping

All of these

Which of the following is not useful considerations regarding weed for successful biological weed control?

Native home of weed must be known

Genetic Composition of Weed

Search for natural predators of weed

None of these

Results of _____ are difficult to observe, measure and demonstrate.

Weed Eradication

Weed Prevention

Weed Control

Weed Management

Which is the best program for small populations of noxious and perennial weeds?

Weed Eradication

Weed Prevention

Weed Control

Weed Management

Hand pulling with the help of a fork, sharp blade or tip of a sickle is termed as _____

Hand Hoeing

Digging

Spudding

Sickling

Mechanical pulling of aquatic weeds with their shallow roots and rhizomes covered in Mud is called _____

Spudding

Chaining

Draining

None of these

Exploitation of escape mechanism to manage weeds is the principle of _____

Zero tillage

Selection of quick growing crop/varieties

Sowing date

All of these

Which is not the advantage of biological weed control method?

Self-continuation

Field specific control

No environmental or chemical pollution

Economically viable

A rubber pipe which carries spray solution to lance is called

Nozzle

Spray Lance

Spray Boom

Hose

Spray droplets become _____ as the spray pressure is decreased

Larger

Smaller

Required

None of these

Decreasing the spray pressure results in a _____ volume of carrier (Water) applied to an area

Reduced

Greater

Optimum

None of these

Proper sprayer calibration is essential to the application of the correct amount of _____ safely and effectively

Water

Herbicide

Carrier

All of the these

Example of a rabbi season weed is

Kasni

Itsit

Didhan

Tandla

Example of a kharif season weed is

Jangli Jai

Bhakra

Jangli palak

Senji

Which type of nozzle is not appropriate for herbicide application

Tee-jet

Hollow-cone

Flood-jet

Flat-fan

For calibration of hand knapsack sprayer, marking off area in the field must be in

Square feet

Square meter

Square karam

Any of these

Formula for computation of water quantity required per hectare to spray herbicide is

Water required = area of acre/area sprayed × quantity of herbicide used on sprayed area

Water required = area of hectare/quantity of herbicide used × water used on sprayed area

Water required = area of acre/area sprayed × quantity of herbicide used on sprayed area

Water required = area of hectare/area sprayed × quantity of water used on sprayed area

Calculate the water required to spray an acre, when a hand knapsack sprayer runs over a distance of 200 feet and carries a spray swath of 7 feet and the water used to spray this area is 5 L.

14.46 L

155.57 L

5.142 L

0.161 L

During Sprayer calibration, if a man covers an area of 15 m × 8 m with 3 liters, how much water is required to spray herbicide on one acre

0.025 L

101.2 L

100 L

40 L

Which of the following weeds has close morphological resemblance with wheat

Jangli Haloon

Jangli chulai

Jangli Jai

Jangli palak

During Sprayer calibration, if a man covers an area of 30 ft x 40 ft with 3.03 liters, how much water is required to spray herbicide on one acre

10.22 L

3.636 L

109.9 L

105.8 L

For weed control in maize, how much Dual Gold 60 WP is required for an area of 3.5 acre, if recommended dose of active ingredient (Atrazine) is 0.45 kg /ha.

0.303 g

0.750 kg

1.06 kg

109 g

Which of the following weeds has close morphological resemblance with wheat?

Itsit

Barley

Oat

Dumbi citti

How much Butachlor super (60% EC) is required for an area of 1 acre, if recommended dose of active ingredient (Bromoxynil) is 0.45 kg /ha.

750 mL

250 mL

304 mL

350 mL

Which of the following is not a rabbi season weed?

Jangli Javi

Itsit

Dumbi citti

None of these

The suitable pressure for spraying herbicide is

20 PSI

10 PSI

40 PSI

50 PSI

The walking speed during herbicide spray must be between

2 to 5 Km/h

3.34 to 8.35 Km/h

3 to 4 Km/h

None of these

Principal elements of conservation agriculture are:

Minimum soil disturbance, permanent organic soil cover and diversified crop rotations

Water movement and gaseous exchange

Both of the given options

None of the given options

Water movement, gaseous exchange and minimum soil disturbance provides:

Something of weeds

Re-exposure of weeds

Maximum aeration

None of the given options is correct

On a waterlogged soil _____ fertilizer\s should be preferred.

Nitrate

Ammonical

Both nitrate and ammonical

Acid forming

While blending two fertilizers, granule size of a macronutrient supplying fertilizer should be _____ that of a micronutrient supplying fertilizer.

Equal to

Larger than

Smaller than

Larger or equal to

Under dry soil conditions, addition of nutrients will:

Increase wilting

Decrease wilting

Not effect plant turgor

Help plant to grow faster

Important component/s of soil quality include:

Texture

Structure

Organic matter fraction

All of the given options

Apparent recovery efficiency can be obtained by:

Multiplying utilization efficiency and physiological efficiency

Dividing utilization efficiency by physiological efficiency

Dividing physiological efficiency by utilization efficiency

None of the given options is correct

In alkaline soils _____ is\are the main problems for successful crop production.

Boron deficiency

Fe toxicity

Fe deficiency and boron toxicity

None of the given options is correct

Poor plant productivity on acid soils is due to:

Al toxicity

Mn toxicity

Excess of H ions

All of the given options

Chlorophyll absorbs light at:

0.67 micrometer

0.67 nanometer

0.656 and 0.774 nanometer

None of the given options is correct

Brady rhizobium is _____ in nature.

Symbiotic

Free living

Non symbiotic

Both symbiotic or free living

_____ bacteria are known to produce vitamin B.

Azospirillum

Azotobacter

Rhizobia

Both Azotobacter and Azospirillum

Trichoderma is a:

Root pathogen

Predator

Symbiotic bacterium

Free living bacterium

_____ are responsible for converting fixed P into available P.

AMF

PGPR

AMF and PGPR

Frateuria aurantia

_____ reaction/s is/are responsible for developing brown color of residues.

Oxidation

Reduction

Oxidation and reduction

Oxidation and polymerization

Higher clay content will cause:

Lower aggregate stability

Lower mineralization

Higher rate of mineralization

None of the given options

Excess N will_____ the availability of P.

Increase

Decrease

Not affect

Sometimes increase and sometimes decrease

_____ uptake is less affected by competition between neighboring roots.

Phosphate

Ammonium

Potassium

Both ammonium and potassium

Concentration of micronutrients (Fe, Cu, Mn, Zn) in soil solution depends upon:

Soil OM contents

Soil pH

Soil redox potential

All the three given options

Under submerged/flooded conditions, the whole system is

Oxidized

Reduced

Both oxidized and reduced

None of the given options is correct

Organic matter decomposition/mineralization decreases under flooded conditions upto:

Twenty percent

Thirty percent

Forty percent

Ten percent

Phosphorous availability _____ under flooded conditions.

Increases

Decreases

Remains unchanged

Sometimes increases and sometimes decreases

The redox potential under extreme flooded conditions goes upto minus 300 mV due to the production of:

Carbon dioxide

Hydrogen sulphide

Methane

None of the given options is correct

Under flooded conditions, the micronutrient that protects the system from going into extreme negative state is:

Iron

Aluminium

Calcium

All of the given options

Mechanism by which nutrients are converted into cellular components is called:

Metabolism

Nutrition

Metabolism and Nutrition

None of the given options

Water erosion is also called_____

splash erosion

rill erosion

gully erosion

all options are correct

Maximum loss of nutrients occurs in _____

sheet erosion

gully erosion

wind erosion

all types of erosion

_____ is the most serious form of erosion

gully erosion

sheet erosion

rill erosion

wind erosion

If vertical slope increases by eight times, the K.E of run-off water will increase by_____

eight times

sixteen times

thirty two times

sixty four times

Addition of silica_____

makes the soil loose

makes the soil compact

does not affect soil structure

none of the options is correct

Crop residues can absorb water _____ times more than their weight

none of the options is correct

twenty

ten

two

Waterlogging results in_____

disappearance of oxygen

disappearance of carbon dioxide

disappearance of methane

all given options are correct

Oxygen deficient soil layer in characterized by _____ colour

dark grey

brown

black

red

Presence of easily decomposable organic matter is an indication of_____

soil reduction

soil oxidation

positive redox potential

none of the options is true

If an Alkali soil gets waterlogged, its pH_____

falls

rises

will not change

will become zero

In a waterlogged soil, the uptake of Zn is lowered due to_____

its antagonistic interaction with p

its reduction

its oxidation

chelation process

_____ is/are not liming material/s

sulphur

basic slag

press mud

both sulphur and press mud

If quick results are required, is considered best liming material _____

slaked lime

limestone

dolomite

basic slag

Due to more ABA, stomata_____

are closed

are opened

remain unaffected

none of the options is true

_____ is an organic N source

proline

ABA

both proline and ABA

none of the options is correct

Highest yielding species have_____

rapid leaf area development and low rate of net photosynthesis

rapid leaf area development and high rate of net photosynthesis

low leaf area development and low rate of net photosynthesis

none of the options is correct

Under favourable soil moisture conditions, genotypes with _____ transpiration efficiency produce more dry matter.

low

high

hundred percent

zero

_____ helps in root proliferation.

P

N

K

NPK

Antitranspirants _____

reflect light and decrease canopy temperature

absorb light and decrease canopy temperature

reflect light only

do not affect canopy temperature

Soils having kaolinite clay show _____ pH than/to having montmorillonite.

higher

lower

almost equal

almost double

In acidic soils, manganese can occur_____

both in divalent or in soluble form

only in divalent form

only in soluble form

in tetravalent form

Deficiency of _____ is considered the real cause for poor plant growth in acidic soils.

P

Fe

Zn

P and Fe

In strongly acidic soil, the dominant form of microorganisms is _____

fungi
bacteria
algae
both algae and fungi

Rice is grouped as _____ responsive crop towards liming
low
high
medium
medium to high

Under normal conditions soils affect yield through _____ primary factors.
three
two
many
five

The option written in Bold is correct answer.

_____ is a mutually beneficial relationship between plant roots and bacteria.
Mycorrhizae
Nitrogen fixation
Chemoautotrophy
Symbiosis

Which of the following processes requires anaerobic conditions?
Nitrogen fixation
Nitrification.
Denitrification
Nitrogen fixation and Denitrification

Assuming that all the nitrogen applied as fertilizer is used by the soybeans, then what is the source of most of the remaining nitrogen needed by the plants growing in this field?

Wet deposition.
Biological nitrogen fixation.
The nitrogen released during the decomposition of dead organic matter.
Denitrification.
Microbial immobilization

Nitrogenase is destroyed by
Nitrogen
Nitrification.
Denitrification
Oxygen

Nodulated legumes fixing nitrogen, but then exposed to mineral nitrogen from the soil or fertilizer N will
continue biological nitrogen without taking up the available mineral N
continue biological nitrogen and also take up the available mineral N
reduce their biological nitrogen fixation activity in proportion to the ability of the mineral N to meet the plant's N requirements
stop nitrogen fixation and rely completely on the mineral N for their requirements

The first detectable step in the interaction of legumes and soil rhizobium bacteria leading to the formation of nodules on plant roots is
soil rhizobia secrete flavoniods that, when detected by the plant, activate plant nodulation (Nod) genes
legume roots secrete flavoniods that, when detected by rhizobia, cause activation of rhizobia Nod genes
legume roots secrete flavoniods that, when detected by rhizobia, cause the rhizobia to produce "nod factors" that signal the plant to activate Nod genes in the plant genome
soil rhizobia produce unknown chemical factors that induce root hair to curl around the microbe

The primary function of leghemoglobin in nodule cells containing biological nitrogen fixing bacteroids i
to carry oxygen from the cell plasma membrane to the bacteroid where the oxygen is used to support respiration
to trap oxygen in the cell cytoplasm in order to protect the nitrogenase enzyme in the bacteroid from toxic amounts of oxygen.

to carry reduced nitrogen containing amino acids from the "N fixing zone" of the nodule to the root vascular system.
to carry N_2 gas from the intercellular air spaces of the root to the N fixation site in the root nodule

Biological nitrogen fixation activity by nodulated legumes is
strongly inhibited by water, light, and heat stresses incurred by the associated plant
generally tolerant to water, light, and heat stresses incurred by the associated plant.
inhibited by water stress, but not by light stress caused by heavy shading.

A reasonable amount of nitrogen fixation (kg ha^{-1} or lbs $acre^{-1}$) annually for a highly active legume system is
3000
300
30
3

Root hairs originate from the root
epidermis.
pericycle.
Cortex
adventitious buds

The process of de-nitrification is
oxidation of ammonium to nitrate
conversion of nitrogen gas into a form usable by most plants
use of nitrate as an electron acceptor
conversion of nitrates to nitrogen gas

The process of nitrogen fixation is
oxidation of ammonium to nitrate
conversion of nitrogen gas into a form usable by most plants
use of nitrate as an electron acceptor
conversion of nitrosamines to nitrogen gas

Which of the following does not lead to increased fixed nitrogen?

Cultivation of legumes

The Haber process of making N fertilizer

Biomass burning

Removal of phosphate from detergents

Which of the following is wrong about ACID RAIN

It comes from fossil fuel combustion products

It is worse in the northeastern U.S. than in the west

It causes an increase in pH of lakes

It leads to the death of some aquatic organisms

Which of the following gases is least important in the problem of global warming?

carbon dioxide

nitrous oxide

hydrogen sulfide

methane

Which is NOT a way in which Nitrogen is lost from the ecosystem?

Conversion into gaseous forms

Erosion of soil

Weathering of parent material

Nitrogen dissolved in solution

Primary Producers are also known as _____.

Heterotrophs

Autotrophs

Phototrophs

Chemotrophs

Which of the following is NOT a process of internally cycled nitrogen:

Nitrogen mineralization

Nitrogen immobilization

Nitrogen demobilization

Nitrification

Ammonification

Nitrogenous compound more readily taken up by microbes is

NO_3

NH_4

NO_2

N

The conversion from ammonium to nitrate is termed:

mineralization

nitrification

immobilization

ammonification

nitratification

Which of the following forms of N cannot be *directly* used by plants**?**

Serine

Lysine

Nitrate

Ammonium

Glycine

N_2

What is an inhibitor on nitrogenase?

Available N in soil

Available P in soil

Available O_2

Available CO2

The key enzyme in the process of BNF

RUBISCO

Rhizobium

Nitrogenase

Kinase

_____ are special soil bacteria those responsible for BNF with legumes.

Free living bacteria

Rhizobia

Nitrobactor

Blue green Algae

In the rhizobia-legume symbiosis, rhizobia provide the plant with

Carbohydrates

Fixed Nitrogen

Energy

Enzymes

_____ strains of rhizobia should be selected for inoculants

Indiginous

Superior

Competitive

Inferior

The most important factor affecting amount of BNF is

Light

Water availability

Number of rhizobia in the soil

Availability of soil N

Amount of nitrogen left in the soil by legumes for subsequent crops depends on the

Legume species

Rhizobium species

Soil environment

Subsequent crop

Entry of the rhizobia to the root occurs by the formation of

Root hair

Infection thread

Nodule

Epidermis

The shape and location of Nodules are mostly determined by

Bacteria involved

Soil Environment

Host legume

Soil Nitrogen

BNF requires biological energy from

Fossil fuels

Soil Nitrogen

Host plant

Plant residues

Legume-rhizobia symbiosis require about kgs of carbohydrates /kg of N fixed.

10

20

30

40

Exchange of plant sugars for NH_3 takes place in

Soil

Nodules

Bacteria

Infection thread

Young nodules that are effective are often _____ in colour

White

Black

Pink to red

Green

_____ form of bacteria is called bacteriod

Active

Non-motile

Dormant

Effective

If inoculant is not stored properly, the number of rhizobia in the inoculant will

Increase

Decline

Remain unaffected

None of the above

Liquid or solid substance containing living rhizobia is called

Inoculation

Inoculant

Inoculum

Agar

Rhizobia are soil bacteria that can infect _____ of legumes for N-fixation.

Stem

Leaf

Root

Shoot

Rhizobia require temperature for their growth in the range of _____

15-20c

20-25c

25-30c

30-35c

_____ is the most serious threat to good quality inoculants.

Refrigeration

Heating

Both A & B

None of the above

_____ is the poorest method of seed inoculation.

Slurry method

Dusting

Seed pelleting

None of the above

Lime pelleting can be beneficial when soils are highly_____

Basic

Acidic

Neutral

None of the above

Rhizobia in coated seeds die rapidly when the legume seeds are planted in__

Cool environment

Cool and moist soil

Hot and dry soil

None of the above

Grains of legumes are rich in_____

Carbohydrates

Lipids

Proteins

Starch

The nitrogen fixation ability of a nodule is referred to as_____

Ineffectiveness

Effectiveness

BNF

None

The quality of various inoculants can be tested by_____

Laboratory tests

Grow - out tests

Field tests

None

Urea Fertilizer contains _____ % nitrogen.

50

64

46

None

Chlorophyll occurs in _____ of the plant cell

Mitochondria

Vacuole

Cytoplasm

Chloroplast

_____ increases the amount of inoculant that will adhere to seed.

Chemical fertilizer

Sticker

Bio-fertilizer

None

_____ are major nitrogen fixing crops.

Cereals

Legumes

Fruit plants

Forests

_____ is the ultimate source of water.

Snowfall

Sea water

Rainfall

Ground Water

Turgor is important because it gives _____ to the cell

Energy

Shape

Plasticity

None

The upper limit of available water is _____.

Permanent wilting point

Capillary water

Hygroscopic water

Field Capacity

The ability of water to enter into different reactions is called as _____

Water activity

Water relations

Water potential

Water loss

Developmental plasticity is a mechanism of _____

Drought escape

Drought tolerance

Drought avoidance

Drought susceptibility

If stomata are closed the water use efficiency_____

Decreases

Increases

remain Constant

None of above

The energy available in a system to perform work is _____

Potential energy

Free energy

Kinetic energy

Net energy

In mature cells most of the water is present in_____

Cell wall

Cytoplasm

Vacuole

Cell membrane

The water potential of pure free water is _____

Minimum

Maximum

Negative

None

The energy developed in a solution due to the presence of solutes is_____

Osmotic pressure

Osmotic potential

Water potential

Turgor pressure

----------is permanent climatic feature of a region.

Drought

Humidity

Radiation

Aridity

In Pakistan, more than ---------- million hectares area is subjected to drought

2

3

4

5

The opening and closing of stomata is called as _____

Circadian rhythms

Stomatal regulation

Stomatal inhibition

None

Hydrophytes have _____root hair.

No

Abundant

Long

Short

PEG stands for_____

Polyethylene glycerol

Polyethylene glycol

Polyethylene glucose

Polyethylene glycogen

First line of defense against drought is_____

Reduced leaf area

Root extension

Stomatal closure

All of the above

The entry of water into the soil is called as _____

Leaching

Infiltration

Percolation

None

Small openings in the bark of woody plants for exchange of gas and water are called a _____

Stomata

Hydathodes

Pores

Lenticels

In response to stress conditions the concentrations of ABA _____in the plants.

Increases

Decreases

Remain Constant

None of the above

Proline is an _____

Amino acid

Imino acid

Protein

Enzyme

The movement of water in tracheids is _____ than the vessels.

Faster

Slower

Same

None of the above

The capacity of a liquid to neutralize the attraction between electrical charges is called as _____

Electro negativity

Electrical conductivity

Dielectric constant

pH

Pressure bomb is an instrument frequently used for measuring_____

Water potential

Turgor pressure

Osmotic potential

All of the above

_____ type of farming is practiced in rain fed areas.

Diversified

Intensive

Extensive

Subsistence

Lands where the growing season is less than _____ days are categorized as Dry lands

120

110

100

90

In _____ zone, the annual rainfall is less than 300 mm.

Arid

Semi-arid

Humid

Sub-humid

ICRISAT was established in _____

Pakistan

India

Syria

Philippines

_____ type of farming is dependent on residual moisture of summer floods and rains.

Rainfed

Rod-kohi

Khushkaba

Sailaba

Water erosion is a major problem in _____

Irrigated areas

Sandy areas

Hilly areas

None of the above

The major type of water available to plants is _____

Gravitational water

Hygroscopic water

Capillary water

None of the above

Desertification is a process of land_____

Development

Degradation

Use

None of the above

Number of acres to be irrigated by the given amount of water within a given period of time is called as _____ of water.

Delta

Duty

Consumptive Use

Beneficial

Part of the rainfall which is retained in the root zone and used by the plants is _____

Capillary water

Run-off Water

Water Harvesting

Effective rainfall

Yield of an individual genotype relative to the highest yielding genotype in the population is called a _____

Superiority measure

Mean yield

Relative yield

Mean productivity

In CAM plants, there is _____ arrangement of CO_2 fixation cycle.

Temporal

Spatial

Hierarchical

None of the above

WUE of rice is _____ than wheat.

Less

More

Same

None of the above

Water always moves from high_____ to low_____

Water potential

Turgor pressure

Osmotic pressure

None of the above

Tracheids are mostly found in _____

Thallophytes

Angiosperms

Gymnosperms

Bryophytes

Photoreespiration takes place in _____

Chloroplast

Peroxisomes

Mitochondria

All of the above

The process of loss of water from living plants is called as _____

Evaporation

Guttation

Transpiraion

None of the above

Transpiraion _____water deficit in the plants.

Creates

Ameliorates

Prevents

Reduces

Chloroplasts are _____ in the guard cells.

Absent

Present

Efficient

None of the above

Root hair are _____

Unicellular

Multicellular

Impermeable

Long living

WUE is maximum in _____plants.

C3

C4

CAM

C3-C4 Intermediates

ABA _____ the closure of stomata.

Stimulates

Inhibits

Regulates

None of the above

Early maturity is a mechanism of drought

Tolerance

Escape

Die-off

None of the above

Osmotically active charged solutes are called as _____

Osmoprotectants

Osmotica

Osmolytes

Electrolytes

Drought can last for _____ period of time.

Definite

Indefinite

Short

Long

_____ is the major limiting factor for plants in rain fed areas.

Water

Low rainfall

High temperature

Erosion

A stream of water is throwing its water into a reservoir whose volume is 328.82 ft^3 .The time to fill this reservoir is 1.5 hours. Find the discharge in ft^3/min .

3.65 ft^3

3.65 ft^3/min

3.65 ft^2/min

All

Makran coastal basin covers an area of _____.

122,400 sq.km

120,100 sq.km

122,400 sq.m

122,300 sq.km

In USA area under irrigation increased from 14M acres in 1910 to_____ in 1960?

30.7M acres

39.5 M acres

29.4 M acres

31.7 M acres

In water balance equation, rainfall – river out flow is equal to_____.

Evaporation

Transpiration

Evapotranspiration

None

PNWRS stands for _____.

Pakistan National Water Resource System

Pakistan National Water Resource Strategy

Pakistan Water Resource Strategy

Pakistan Water Resource system

In equation I-E+G-R=Wu/t, I represents the ____

Rate of infiltration into the unsaturated zone (mm/d)

Rate of infiltration into the saturated zone (mm/d)

Rate of percolation to the saturated zone (mm/d)

Rate of ET from unsaturated zone (mm/d)

Matured parts of plants like fresh harvested grains contained moisture_____?

16-20

15–20%

15-25%

15-30%

Quantity of water used by plants (WP) for its metabolic activities estimated as_____.

More than 1%

Less than 2%

Less than 1%

1%

The removal of excess surface or ground water from the root zone of a crop by meant of surface or sub surface drains known as____.

Drainage

Transpiration ratio

Transpiration

Leaching

Eastern rivers contribute_____maf of water.

9.47

8.47

8.57

>8.47

The total quantity of water used for irrigation is termed as_____.

Gross irrigation requirement

Net irrigation requirement

Irrigation frequency

None

_____is the ratio between the quantities of water from the source and that which reaches the irrigation area.

Conveyance efficiency

Distribution efficiency

Farm efficiency

Water use efficiency

Ripening and enlargement comes under_____phase.

Vegetative

Reproductive

Maturity

Harvesting

Flow domain consists of_____

river catchments

ground water basin

Physical Entities

All of above

Equation " Rainfall – river out flow =Evapotranspiration" represented the___.

Water Balance Equation

Flow domain equation

Transpiration ratio equation

None

The stage of elongation of internodes in relation to irrigation known as___.

Shooting

Stem elongation

Jointing

Booting

Rate of Leaf appearance and Leaf expansion decreased due to _____stress?

Heat

Drought

Nitrogen deficiency

Metal stress

In equation " Ei=Wet/Wa * 100 " Wa represented the

Volume of water applied to a given area

Average water applied to given area

Volume of water in a soil

Water in soil after evaporation

Water loss from given area

By efficient use of water in crop production we can save____water.

70%

25%

80%

30%

An agronomic/ physiological approach centered on yield related to water input (WUE) .

TDM/ sum of ET

Sum of ET/ TDM

Sum of ET

TDM/seed

The ratio of volume of irrigation water consumed by the crop of an irrigated area to the volume applied to this area is known as.

Farm efficiency

Irrigation efficiency

Conveyance efficiency

Distribution efficiency

Water application efficiency on the farm depends on many factors like____.

Soil topography,

Texture

Structure and vegetative cover

All of these

The concept “Plants which have very low rates of transpiration also have very low rates of photosynthesis and grow s lowly” given by_____.

Hyden,1953

Penman,1952

Lud1ow and Muchow,1990

None

Area for triangular section can be measured by A = ___.

Width*Height

Width*(Depth)^2

Width*Height + Width*(Depth)^2

None

The lower the R.H. is the greater will be the _____.

Evapotranspiration

Yield loss

Moisture loss

None

The Water use efficiency decreases with increasing_____ for cool climatic plants.

Relative humidity

Seed rate

Oxygen

Temperature

When Dm<DI then it means ____ of yield.

Does not decline

Reduced

No effect

None

Effective root depth for cereals is____-

0.45m

1m

0.5m

1.5m

Time and amount of irrigation water comes under_____.

Irrigation scheduling

Irrigation intensity

Cropping scheme

Irrigation planning

Irrigation scheduling is capable of saving of water used for irrigation

15-25%

15-30%

10-15%

10-20%

According to _____ 50% water depletion is necessary before irrigation application.

Dorrenbos and kassam

Richie

Pennman

Dorrenbos

The soil moisture content is determined by using one of the following_____.

Gravimetric method

Gypsum block method

Transio meter method

All of these

Crops with shallow root system have_____ Dl value than crop with deep root system

Low

High

Medium

Medium to high

Value of effective root depth for cereals is ____.

3.3 feet

3.9 feet

2.3 feet

3.7 feet

We have_____ major sources of water.

Three

Four

Two

Five

Critical soil moisture deficit depends on___.

Nature of crop

Seed rate

Fertilizer

Sowing date

Rainfall and snow is water source for_____.

Indus basin river

Closed basin kharan desert

Both of these

None

We are getting approximately ___ water from Closed basin Kharan desert

5.5 maf

4.3 maf

4.8 maf

4.5 maf

Makran coastal basin constitutes of streams of_____.

Malir

Hub

Porali

All of these

Ground water is also found in some barani lands at depths varying from_____.

100 to 200 feet

100 to 150 feet

100 to 300 feet

200 to 250 feet

Eastern rivers contribute _____of water.

8.50 maf

9.47 maf

8.01 maf

8.47 maf

Pakistan having____ reservoirs?

Three

Two

Five

Eight

Water released by the hydropower plants returns to _____.

Canal system

Field area

Oceans

River system

The gross irrigation requirement can be determined for a

Field

Farm

Outlet command area

All of these

Reproductive phase of plant includes____.

Flowering stage

Enlargement

Ripening

All of these

The stage when two nodes be seen *i.e.*, beginning of shooting known as___.

Jointing

Stem establishment

Tillering

Booting

If the volume of one cubic foot of water is passing through in a given cross section in one second, the discharge is said to be__.

Liters/sec

Cubic feet/sec

Cubic meter/sec

All of these

Ripe for harvesting called____stage

Dead ripe

Milking

Dough

Reproductive

Net consumption of water is normally about___ of the total water available.

3%

5%

30%

2%

_____ water is utilized in industry.

2%

1%

10%

20%

The sequence of growing crops by an individual farmer in a specific area is called as

Cropping scheme

Cropping pattern

Farmer's pattern

Cropping intensity

In most of the dicot seeds, the mode of germination is

Hypogeal

Epigeal

Both hypogeal and epigeal

None of the above

Blind hoeing is normally carried out in

Maize

Wheat

Sugar-cane

Soybean

Plant population of a plot is calculated from

Length of the plot

Width of the plot

Area of the plot

None of the above

Ozone layer is present in

Stratosphere

Mesosphere

Exosphere

Thermosphere

Growing of only one crop on a piece of land year after year is called as

Intensive farming

Monoculture

Intercropping

Extensive farming

Leaf area index is always _____ to land area.

Equal

Inversely proportion

Directly proportion

None of the above

Solarimeter is used to measure the intensity of

Light

Temperature

Humidity

Pressure

In ammonium sulphate % of N is

18

19

20

21

NIAB is the abbreviation of

National institute of agriculture and biology

Nuclear institute of agriculture and biology

National institute of agriculture and bio-technology

Nuclear institute of agriculture and bio-technology

The natural death of leaves in which leaves die and do not detach by twigs/ petiole is called as

Senescence

Abscission

Above both

None of the above

The environment of the soil is called as

Lithosphere

Biosphere

Atmosphere

Hydrosphere

_____ generally promote elongation of roots

Auxins

Gibberellins

Cytokinins

Ethylene

Agro-meteorology is defined as the science of _____

Atmosphere

Atmospheric physics

Crop-weather relations

Crop production in relation to weather

Solar radiation in the _____ wave band is useful for plant growth

Ultraviolet

Visible

Infrared

red

Temperature indicates _____

Heat energy

Intensity of heat energy

Heat units

Degree of coldness

Optimum temperature for crop growth in Pakistan is

15 – 20 ˚C

20 – 25 ˚C

25 – 30 ˚C

30 – 35 ˚C

Effective rainfall means _____

Favorable for commencement of sowing operations

At least 25 mm of rain at a single occasion

At least 30 mm of rain at a single occasion

Half the value of potential evapotranspiration

Transpiration is loss of water from _____ into atmosphere

Dead plant

Green plants

Animals

Lakes

Remote sensing is the technique of obtaining information from a distance using ____

Sensors

Glasses

Cameras

Chemical receptors

A model is a schematic representation of _____

System

Real object

Real crop

Animal

Climate change refer to _____

Increase in atmospheric CO_2 concentration

Increase in temperature

Deficiency in rainfall

Occurrence of floods

Moisture stress at _____ stage decreases maximum grain yield

Late tillering

Booting

Heading

Grain ripening

Excess water causes injury to plants due to _____.

Accumulation of salts

Low oxygen supply

Nitrogen deficiency

Reduction in permeability

Water requirement of a crop is dependent upon _____

Variety

Soil

Fertilizer

Climatic factors

Cool temperature during _____ are associated with large wheat yield.

Tillering

Stem elongation

Heading

Grain growth

Arid climate indicates _____ of rainfall.

Less than 50 mm

Less than 100 mm

Less than 200 mm

Less than 50 mm

Humid climate indicates _____ of rainfall.

More than 1000 mm

More than 1200 mm

More than 1400 mm

More than 800 mm

After anthesis crop growth is least affected by:

High temperature

Drought

Low light

Photo period

Cotton plant belongs to:

CAM

C3 plants

C¬4

none of above

In cereals contribution of flag leaf is:

More than 20%

Less than 80%

More than 60%

None of them

At early stages of cereal growth LAI depends upon:

High light intensities

Low light intensities

High temperature

Both photoperiod and temperature

Economical yield is the product of:

H.I.

TDM

H.I and TDM

TDM and grain yield

Size of seed directly related to:

More temperature

Source-sink relationship

More photosynthetic activity

Photoperiod

First stable compound in C4 plant is:

Phosphoglycericacid

PEP carboxylase

Oxalic acid

None of above

Photorespiration is high in:

CAM plants

C4 plants

C3 plants

All of above

Light saturation is not a problem in:

Cactus

Desert

Field

Legumes

Carotene found in forages is a rich source of

Vitamin A

Vitamin B

Vitamin E

None of the above

Seed rate for berseem crop is

6-8 kg acra^{-1}

6-8 kg ha^{-1}

1-2 kg acra^{-1}

None of the above

The word written in parentheses after the botanical name indicates

Family name

Species name

Scientist name

None of them

Which one is not the branch of Animal Husbandry

Stock rearing

Sericulture

Dairy Farming

Poultry farming

Science which deals with the heredity and its varieties is

Ecology

Genetics

Geology

None of these

Science of atmosphere is called

Geology

Ecology

Meteorology

None of these

Cultivated or cropped area of Pakistan is about

12 Million hectares

22 Million hectares

32 Million hectares

42 Million hectares

Which is essential for chlorophyll formation

Light

Humidity

Rain fall

None of them

Seed which is produces under the direct supervision of plant breeders is called

Pre basic seed

Basic seed

Certified seed

Approved seed

Ripened ovule is called as

Seed

Fruit

embryo

None of them

In Barani areas all the nitrogen should be applied at the time of

Sowing

1st irrigation

2nd irrigation

At flowering

In Pakistan fodder crops are grown on an area of

10 m. ha

14 m. ha

2 m. ha

5 m. ha

Removal of off type plants from the crop is called

Thinning

Rouging

Topping

Suckering

_____ is helping to speed up fodder harvesting and preservations

Farm Mechanization

Seed priming

Ratooning

None of them

The example of winter annual legume forage crop is

Egyptian clover

Oat

Barley

All of them

Seed rate of forage maize is

100 kg ha^{-1}

30 kg ha^{-1}

100 kg $acre^{-1}$

50 kg ha^{-1}

(*Pennisetum americanum* L) is the botanical name of

Pearl millet

Sorghum

Guara

Cowpea

Mechanical manipulation of soil to provide soil condition for crop growth

Tilth

Tillage

Mulching

None of them

The major type of water available to plants is _____

Gravitational water

Hygroscopic water

Capillary water

Capillary rise

WUE is maximum in _____plants.

C3

C4

CAM

C3-C4 Intermediates

Osmotically active charged solutes are called as _____

Osmoprotectants

Osmotica

Osmolytes

Electrolytes

Most of the halopytes belong to

Poaceae

Aezoaceae

Cyperaceae

Chenopodiacae

Plant development that gives rise to new organs and basic plant form are:

Vascular cambium

Secondary growth.

Primary growth

Tertiary growth.

For water at 25^{o}C, the heat of vaporization is

41 KJ mol^{-1}

41 KJ mol^{-1}

43 KJ mol^{-1}

44 KJ mol^{-1}

The amount of micronutrients in higher plants on plant dry weight is always

≥ 1000 μg g^{-1}

≤ 1000 μg g^{-1}

≥100 μg g^{-1}

≤100 μg g^{-1}

Glycolysis takes place in

Cytoplasm

Chloroplast

Mitochondira

All

For wet soils water potentional is

Close to zero

far from zero

> 1

< 1

The water content of soil is measured in several ways. The reference and classical method is____.

Thermometer method

Gravimetric

Electrical conductivity

Neutron Probe

Drying is done at _____ to constant weight.

100-104 ˚C

105-110 ˚C

111-115 ˚C

116-120˚C

If two-third of the required water available one could obtain_____% of the maximum yield.

50 – 60 %

70 – 80 %

90 – 95 %

85 – 90 %

At present approximately _____% of all the available water supply is used for agriculture and food production.

60 %

70 %

80 %

90 %

About _____% of irrigation water is lost before it reaches farmer's field.

39 %

49 %

59 %

69 %

Water use efficiency = _____.

WUE=yield/EF

WUE=yield/ET

WUE=ET/yield

None of them

Present system efficiency of irrigation water use is

25 %

35 %

45 %

55 %

Exchangeable sodium percentage for saline soils is _____.

equal to 15

less than 15

less than 18

more than 15

Saline sodic/sodic soils can be reclaimed by using.

$MgSO_4.2H_2O$

$CaSO_4.2H_2O$

$BaSO_4.2H_2O$

$K_2SO_4.2H_2O$

Which one is not the cause of water logging.

rainfall

flooding by rivers

defecting system of canals

sowing time

Cereals grown on saline cultures show _____ colour in the leaves when plant. approach maturity.

blacking

yellowish

reddish

greenish

One cusec is equal to _____ gallons.

12.24

6.24

10.24

8.24

The strips laid along the contour at right angles to the natural direction of the slope is called _____.

wind strip cropping

buffer strip cropping

field strip cropping

contour strip cropping

The soils having organic matter more than 50% are called _____.

muck soils

peat soil

colluvial soils

glacial soils

The process of removing excess soluble salts or excess exchangeable sodium from soils is called _____.

fertilization

scarification

reclaimation

starification

_____is considered to be most important of the soil organisms bringing about the conversion of NH_4^+ to NO_2^-

Nitrosomonas

Nitrobacter

Azotobacter

Azospirillum

_____ generally augments the utilization of phosphorus which is water soluble:

Broadcast

Broadcast and incorporation

Band placement

None of these

Stress can be induced by various factors including diseases, cold or pesticides and

Rain

Wind

Drought

None of above

The MIRS technique is currently used for identifying ideal combination of natural products to combat disease and

Pest

Stress

Drought

None of above

Zero tillage increased production _____ by reducing the cost of fuel and labour.

10-15%

4-10%

15-20%

None of above

Remote sensing is simply obtaining information about an object touching the object as

Without

With

Both a & b

None of above

The crop yield models may be (1) Climatological model (2) Water stress model (3) _____

Environmental model

Soil model

Crop growth model

None of above

Rice plant respires via _____

Parenchyma cell

Aerenchyma cell

Chlorenchyma cell

None of above

An economical alternative of rice transplanting to a traditional practices is

Parachute rice transplanting

Direct seeding

Transplanting

None of above

Weeds are mostly _____

C_3 plants

C_4 plants

CAM

None of the above

The certified seed of wheat must have purity_____.

80 %

85 %

90 %

98 %

The moisture percentage for safe storage of cereal seeds is

0-5 %

10-12 %

6-9 %

13-15 %

The tests performed for judging the quality of seed are

Purity and germination

Seed length and weed seeds

Moisture contents

a + b + c

Seed is stored in dry conditions primarily to check the growth of _____.

Insects

Rodents

Moulds

None of the above

How much quantity of seed should be taken from each container during sampling _____.

Equal

Less than ½ of previous

1/3 than the previous

1/4 than the previous

Bold or large seeds in cob are present in the _____.

Top portion

Middle portion

Bottom portion

Top and middle portions

The universal requirement for germination are _____ .

Water

Oxygen

Temperature

a + b + c

Hard seeds are those which have seed coat impervious to _____.

Water

Oxygen

Water and oxygen

Light

The cause of the greenhouse effect is

Excess of nitrogen in the atmosphere

Excess of carbon dioxide in the atmosphere

Heat from cooking fires of ever-increasing population

None of the above

Which of the following is NOT a greenhouse gas?

Methane

Nitrous oxide

Argon

Ozone

On an average, what percentage of the Earth's atmosphere by volume consists of carbon dioxide?

About 4 percent

About 0.4 percent

About 0.04 percent

About 0.004 percent

In 2008, what country was found to have overtaken the United States to become the top global emitter of carbon dioxide?

India

Japan

China

Russia

How many pounds of carbon dioxide is released by burning one gallon of gasoline?

About 1 lb.

About 5 lbs.

About 10 lbs.

About 20 lbs.

What energy source is the single largest contributor of human-made carbon dioxide in our atmosphere?

Natural gas (methane)

Coal

Petroleum

Nuclear power

In 2015, France will be hosting and presiding the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21/CMP11), otherwise known as “Paris 2015”

30th October 2015

10th November 2015

30th November 2015

30th December 2015

Temperature are the highest at the _____ and the lowest at the poles.

Equator

Longitude

Altitude

Latitude

Wavelength below 400nm is referred to as:

Infared

Ultra-Voilet (UV)

PAR

Cosmic rays

The ratio of reflected short wave radiation to the incident shortwave radiation on a surface and expressed in percentage is:

Albedo

Energy Balance

Radiation Balance

Net Radiation

Radiation Instruments measures the global solar radiation reaching the earth's surface is:

Pyradiometer

Albedometer

Pyrheliometer

Pyranometer

The Instrument which measures bright sunshine hour and cloudiness is:

Net Radiation

Sunshine Recorder

Shading ring Pyranometer

Pyranometer

The science of measuring and recording the direction and speed of wind is called:

Anemometery

Anemometer

Wind vanes

None of Above

The atmospheric disturbance in which the air pressure decreases at a particular location and there is a wind movement towards the center is known as:

Cyclones

Anticyclones

Windward Direction

Leeward Direction

The form of precipitation in which drops are of diameter 0.5µ m and more are:

Rain

Snow

Drizzle

Hail

The Term monsoon appears to have originated from the_____word which means season.

Latin

Greek

Arabic

Persian

One Standard atmosphere is equal to:

101,325 hPa

10,132.5 hPa

1013.25 hPa

101.325 hPa

Crop models are tools

Mechanical

IT

Climate

Physiological

Crop models are

Philosophical representation of a system

Agronomical representation of a system

Physiological representation of a system

Schematic representation of a system

Output data of crop models are affected by changing

Weather, Phenology and Soil

Soil, Weather, Genotype and crop management

Soil, crop management and Yield Components

Soil, crop management, Yield Components and Genotype

The most used model globally

EPIC

APSIM

AQUACROP

DSSAT

APSIM: A crop model build in

USA

KOREA

Australia

China

Minimum input data set require to run crop models are

Soil, management, Weather

Soil, Weather, Phenology, management

Soil, climate data, irrigation, Temperature

Soil, weather, crop biomass, phenology

Crop models are not good in simulation of

Yield and yield related traits

Diseases and insects impacts

Water and rainfall impacts

Time course crop biomass and leaf area

GCMs stands for

General Circulation Models

Global Climate Models

Growing Cereal Models

Green Crop Models

Impacts of climate change on crops are simulated by

Crop Models

Climate Models

Weather Models

None of these

To provide comparable conditions, all plots in the experiment must be treated alike as much as possible, except for the _____ under study:

Factor/s

Level/s

Replication

Error

A valid estimate of an experimental error can only be achieved if the allotment of treatments to the plots is done by _____ procedure:

Replication

Randomization

Local control

Design

Large plot sizes are normally used for _____ crop:

Leguminous crops

Forages

Wheat

Cotton

Variability in plants is more ranked in crops belonging to the crop:

Self pollinated

Hybrids

Both a & b

Cross pollinated

---------- refers to the effect of one plot upon the adjacent one (Border or Alley effects):

Inter-plot competition

Intra plot competition

Both a & b

None of above

The difference among experimental plots treated alike is called:

Experimental error

Coefficient of variation

Systematic error

None of above

In many studies the adjacent plot yields show more ---------- than any other two plots:

Correlation

Regression

No relation

All of above

The experiment intended to the detection of faulty technique and inadequate methods in subsequent experiments is categorized as:

Simple experiment

Factorial experiment

Preliminary tests

None of above

Valid estimation of an experimental error can be achieved by:

Replication

Factorial arrangement

Randomization

All of above

Border effect is more prominent along:

Water channel, path and one space

Water channel, path and inter-row spacing

Water channel, inter-plant spacing and open space

All of above

The experimental plot size is not influenced by:

Climatic factors

Nature of crops

No. of treatment

Methods of operation

Fallacious reasoning from adequate data is the type of:

Failure to control the personal equation

Faulty experimental design

Inferior technique

Improper interpretation of results

A good experiment incorporates all possible means of minimizing the _____:

Experimental error

Coefficient of variation

None of above

Farmer should start the land preparation for _____ as soon as possible after harvest of Rice:

Cotton

Sugarcane

Wheat

Mungbean

Proper drainage of field is required in _____ areas:

Saline

Rainfed

Water logged

Fertile

Most of field crops, except _____ cannot stand water logging:

Rice

Wheat

Maize

Cotton

Adequate _____ should be used to obtain proper plant population in the field:

Seed rate

Irrigation

Fertilizer

Tillage

Soil should be in proper _____ conditions at time of sowing:

Wattar

Sattar

Ojla

Sukroo

According to Food and Agriculture Organization, one unit of fertilizer could generate about _____ units in crop production:

10

5

15

20

Phosphorous is usually needed in less quantity than _____:

Potassium

Boron

Nitrogen

Calcium

---------- does not move readily in the soil and largely remains at point of application:

Phosphorus

Nitrogen

Potassium

Magnesium

Which nutrient is generally applied in split form

Nitrogen

Phosphorus

Potassium

Zinc

_____ is applied at the sowing. However, in sandy soils, if deficient, split application is desired to minimize leaching losses.

Potassium

Nitrogen

Phosphorus

Calcium

_____ of the nitrogenous fertilizer is applied at sowing for most of the crops

One third

Full

Double

One and half

_____ is of great importance with respect to climate, this affects amount of nutrients need, leaching losses and availability of nutrients

Rainfall

Temperature

Humidity

Sunshine

_____ losses of Urea in the form of NH3 will be more if there is shortage of water

Volatilization

Leaching

Nitrification

Ammonification

Most of our soils are alkaline, where use of _____ fertilizer give the right results

Acidic

Nitrogenous

Basic

Phosphatic

After maize, in light soil, keep nitrogen in _____ range of the recommendations

Higher

Lower

Medium

Zero

If well rotted, farmyard manure has been applied, reduce N dose by _____ kg ha-1

20

40

10

50

If the Rabi crop has been fully fertilized, the dose of _____ to a following Cotton crop may be reduced

Phosphorus

Ammonium

Nitrate

Nitrogen

Crops on saline soils respond well to _____ fertilizer

Phosphorus

Nitrogen

Potassium

Boron

If harvesting in _____ delayed, with rain, the grains start germination.

Maize

Rice

Wheat

Cotton

_____ is produced and distributed by various seed agencies

Approved

Certified

Foundation

Basic

Germination %age of good quality seed should be around _____%

90

70

50

100

Mixing of poor quality seed with good quality seed or mixing of seed of different varieties is called_____

Adulteration

Mechanical mixtures

Manual mixtures

Threshing

Cultivation of soil after germination and during growth period of crop is _____

Intertillage

Earthing up

Seed bed preparation

Primary tillage

Tillage carried out after harvesting of one crop for complete coverage of crop residues and to break clods

Fallow cultivation

Secondary tillage

Hoeing

Earthing up

Most of field crops, except _____ cannot stand water logging

Rice

Wheat

Maize

Cotton

PDOP stands for

Position dilution of precision

Pasture dilution of precision

Park dimension of precision

Position dimension of precision

Each satellite orbits the earth in about _____hours

12

24

36

6

DGPS works by placing a GPS receiver at a _____ location, this is called a reference station

Known

Fixed

Standard

Variable

IKONOS collects panchromatic band (.45 to .90 mm) at _____m resolution

1

2

5

10

The SWATH width of Landsat is _____km

183

170

155

197

The target accuracy of WAAS system is _____ meters horizontal and vertical

7

3

15

1

SPOT satellite has ___ modes

2

3

4

5

Which of the following is not the source of error in GPS

Systematic

Multipathing

Orbits

Relativity

LANDSAT-7 launched in _____

1999

1978

1982

1995

In GPS, the satellites orbiting the earth and transmitting timing and ranging messages is

Space segment

User segment

Control segment

All of these

GPS can measure the area

True

False

SPOT is _____ satellite

French

US

German

Chinese

_____ and near IR radiation is absorbed more by water than shorter visible wavelengths.

Red

Green

Blue

Yellow

The area imaged by a satellite on the surface, is referred to as the _____

Swath

Path

Swoth

Orbit

In GPS, orbital error are

>2m

< 1m

1-2 m

<2 m

Active Microwave (RADAR) satellites can acquire images of earth

Day and Night

Day

Night

None of these

There should be two sub water channels having a width of _____ m

1

1.5

2

0.5

The replication bund for clayey soils should be _____ m

0.6

0.3

1

1.5

The crop should be sown on _____

Gross plot

Net plot

Non experimental area

Non experimental plot

The inputs should be applied on the basis of _____

Gross plot

Net plot

Non experimental plot

Non experimental area

The Blocks with in an experiment should be as similar as possible and plots within blocks should be as dissimilar as possible

False

True

In designed experiments, treatments as imposed (manipulated) by researcher using standard protocols

True

False

Treatments are defined on the basis of existing groups or circumstances

Observational study

Designed experiment

Unplanned experiment

Laboratory experiment

Planning of an experiment to objectively test the hypothesis is part of The Scientific Method

True

False

"Selection of treatments" is part of

Panning an experiment

Hypothesis

Data

Interpretation

Variation between plots treated alike is always _____which is called Experimental Error

Present

Absent

Minimum

Maximum

Under Natural sources of error in field experiments, Climatic differences form year to year is example of _____

Seasonal variability

Plant variability

Soil variability

_____ fields may be better suited to applied research

Farmer

Research station

University

The area is planted uniformly to a single crop, trial is partitioned into small unites and areas of equal yield are delineated

Uniformity trails

Basic research trails

Adaptive research trails

Laboratory trails

Randomization is performed to introduce bias

False

True

Under border effects, plants along the edges of plots often perform similar than those in the center of the plot

False

True

Procedure whose effect will be measured

Treatment

Experiment

Factor

Variable

Experiment units that receive the same treatment

Replication

Factor

Treatment

Experimental error

Allocation of treatments to the experimental units in such a way that each unit has an equal chance of receiving any treatment is called as _____

Randomization

Replication

Experimental error

Treatment

Under Frequency Distribution, Formula of range is

Max. value - Min. value

Max. value - Mean value

Min. value - Min. value

Mean value - Median value

A design in which the treatments are assigned to the experimental units completely at random, that randomization is done completely at random

CRD

RCBD

LS Design

The treatments are assigned at random to the experimental units with in each block, which means the randomization is restricted within the blocks

RCBD

CRD

LS Design

Calculate the requirement of ammonium sulphate to supply N @ 25 kg/ha for an area of 2500 m square

31.25kg

50.00kg

35.25kg

29.31kg

Find out the seed requirement (kg) of maize for 4 ha from the following observation, (a) spacing: 75 cm x 25 cm, (b) test weight: 300 g, (c) germination percentage: 90, (d) Purity percentage: 98.

72.56

66.69

82.68

The _____ is a period in the crop growth cycle during which weeds must be controlled to prevent yield losses.

CPWC

CWFP

CTWR

The critical period of weed competition is approximately _____ of the duration of the crop

1/3

2/3

1/2

1/1

_____ refer to the reduction in crop yield due to the presence of weed in comparison to weed free plots

Weed index

Weed control index

Weed control efficiency

Weed persistence index

The crop yield obtained during this period is almost similar to that obtained by the full season weed free conditions

CPWC

CWFP

CTWR

The start of critical period of weed competition (CPWC) is determined by estimating _____

CTWR

CWFP

CTFP

CWWR

Gompertz model equation is used to determine

CWFP

CTWR

Start of competition period

CPWC

In a weed control experiment in wheat crop, dry-weight of weeds n un-weeded plots was 500 kg/ha, whereas in isoproturon treated plots, it was 250 kg/ha, find out the WCE?

0.5

0.4

0.3

0.6

The critical period of weed competition (CPWC) in groundnut is _____ days after sowing

30-50

15 -50

30-75

0-50

Weed dry weight in butachlor + hand weeding and weedy check plot in rice are 80 and 95 g/m2, respectively. Corresponding grain yield are 18 and 11 q/ha. Calculate the weed management index?

4.03

2.46

10.6

6.48

The critical period of weed competition (CPWC) in maize is _____ days after sowing

15-45

0-60

30-75

45-90

The critical period of weed competition (CPWC) in soybean is from_____ stage

Ve to V3

Ve to R2

Vc to V3

Ve to R5

The start of critical period of weed competition (CPWC) is determined by model-equation

Logistic Model

Gompertz Model

All of these

Logit Model

Remote sensing techniques make use of the properties of _____ emitted, reflected or diffracted by the sensed objects

Electric waves

None of these

Electromagnetic waves

Wind wave

A reduction of nitrogen nutrient in plants

All of these

Affects leaf color

Reduces chlorophyll concentration

Reduces reflection in green portion of spectrum

The altitudinal distance of a geostationary satellite from the earth is about

36000km

70000km

15000km

90000km

Which one of the following helps to identify the objects on the earth surface?

Spectral signature

Atmospheric window

Radiometer error

None of these

The reflection of solar energy is characterized by the water content in the leaf, in the reflective optical infrared

Visible (0.4 - 0.7 μm) region

Near-IR (0.7 - 1.3 μm) region

Short wave-IR (1.3 - 2.7 μm) region

None of these

The interaction of the electromagnetic radiation produced with a specific wave length to illuminate a target on the terrain for studying its scattered radiance, is called:

Passive remote sensing

Active remote sensing

Neutral remote sensing

None of these

The refractive index of the ocean water:

Increase with salinity

Decrease with salinity

None of these

The various stages occurring in GPS system are described below: 1. Generation of an output to the user 2. Detection of the GPS signals 3. Processing the data in the built-in-computer 4. Decoding the GPS signal. The correct sequence of the stages is

2,4,3,1

1,2,3,4

1,4,3,2

1,3,2,4

The normal altitude of GPS satellite is about

20,200 km

40,000km

60,200km

1000 km

The GPS receivers are generally used for

Vehicle tracking

Precision agriculture

All of these

Military

The arrangement of terrain features which provides attributes: the shape, size and texture of objects, is called:

Spatial

Spectral

Temporal

All of these

Leaf/Vegetation reflectance depends primarily on

The pigments

Internal cell structure

Equivalent water content

All of these

Earth observations from a satellite platform provide

Synoptic view of a large area

Repetitive observations of the same area with intervals of a few minutes to a few weeks

Both of these

Which one of the following residual biases involves the GPS accuracy?

Satellite dependent biases due to uncertainty in the orbital parameters of the satellite

Receiver-dependent biases due to clock stability with line

Signal propagation biases due to the sphere and troposphere propagation

All of these

The GPS space segment consists of Navigation Satellite Timing and Ranging whose number is

8

12

16

24

The GPS space segment consists of Navigation Satellite Timing and Ranging whose number is

Spectral variation

Spatial variation

Temporal variation

All of these

The infrared portion of EMR lies between

0.4 - 0.7 μm

0.5 mm to 1 μm

0.7 - 1.3 μm

0.7 to 14 μm

The basic requirement of any sensor system is:

Radiometric resolution

All of these

Spatial resolution

Which one of the following statements regarding remote sensing is correct?

The interaction of the electromagnetic radiation with the target

The emission of electromagnetic radiation from the target

Both (a) and (b)

Neither (a) nor (b)

Which among the following wave is not employed in case of remote sensing?

Visible ray

X-ray

Thermal IR

Radio waves

DGPS is

A means for using GPS in your personal computer.

A SCHEME to provide GPS data in a digital format.

an extension of GPS which improves accuracy.

Airplane and boat pilots use GPS for

Mapping

Limit setting in air or water

Navigation

Bearing

The law which helps in making choices from number of input combinations is known as _____

Law of substitution

Law of marginal returns

Law of marginal utility

Law of opportunity cost

The law of diminishing marginal return states that, as additional units of a variable input are used in combination with one or more fixed inputs, _____will eventually begin to decline.

Average physical product

Marginal physical product

Marginal value product

Marginal input cost

_____is defined as the change in total in put cost, or the addition to total input cost caused by using an additional unit of input

Marginal physical product

Average physical product

Marginal input cost

Marginal value product

The term marginal in economics refers to _____ changes, increases or decreases

Sudden

Substantial

Significant

Incremental

Haber-Bosh process allows nitrogen fertilizers to be produced synthetically

Nitrogen

Phosphorous

Potassium

Calcium

_____considered the father of the Green Revolution, won the Nobel Peace Prize in 1970.

Fritz-Haber

Norman Borlaug

John Deere

Eli Whitney

_____farming is a kind of agriculture where a lot of money and labour are used to increase the yield that can be obtained per area of land

Subsistence

Nomadic

Intensive

Fish

A _____ interest rate stays the same over the life of a loan

Compound

Variable

Prime

Fixed

_____ is a financial statement that shows the assets, liabilities, and owner's equity of a business at a particular date:

Balance sheet

Income statement

Profit loss statement

Bank statement

If a cheque is presented for payment after three months from the date of cheque, it is called_____

Post Dated Cheque

Stale Cheque

Mutilated cheque

Order cheque

Regarding layout of field experiments, the crop should be sown on _____

Gross plot

Net plot

Non experimental area

Non experimental plot

Variation among experimental plots treated alike is always present which is called _____

Randomization

Blocking

Replication

Experimental Error

Procedure whose effect is to be measured is _____

Experiment

Factor

Treatment

Variable

Experiment units that receive same treatment are _____

Factor

Replication

Treatment

Level

The design which applied in the situations where variability in two directions

Latin Square Design

CRD

RCBD

Factorial experiments

After _____ harvesting land preparation for wheat is time and energy consuming process

Rice

Cotton

Cluster bean

Pearl millet

_____ requires soil preparation up to shallow depth

Cotton

Maize

Wheat

Sugarcane

Land should be ----------in saline areas to avoid salt accumulation on raised soil.

Shallow ploughed

Well leveled

Pulverized

None of these

Each day's delay in sowing of wheat after mid November to mid December results in reduction of _____ kg grain acre-^{1} day^{-1}

5

10

15

25

_____ mainly depends on quality and quantity of seed.

Plant Population

Soil Fertility

Plant Protection

Irrigation

In Barani areas, typically all nitrogen fertilizer is applied at _____

1st irrigation

Sowing

2nd irrigation

Flowering

_____ is the progeny of the basic seed

Breeder Seed

Basic or Foundation Seed

Certified or Registered Seed

Approved Seed

Storage life _____years, if seed moisture contest of cereals are 8-10%.

0.5

1

2

4

Tillage is one of the important mechanical methods of controlling _____

Rodents

Diseases

Weeds

Birds

_____ results in breakdown of capillary action

Hoeing

Herbicide spray

Irrigation

Fertilization

Which of the following is not a primary tillage implement?

Disc plough

Disc harrow

Chisel plough

Sub-soiler

Single Superphosphate (SSP) contains _____% phosphorous

26

46

18

60

Nitrogen required = 20.5 kg, Fertilizer to be used is Urea, Calculate the amount of Urea needed to supply 20.5 kg Nitrogen?

100kg Urea

25kg Urea

150kg Urea

45 kg Urea

English name of *Cynodon dactylon* is _____

Bermuda Grass

Wild Oat

Purple nut sedge

Jungle Rice Grass

Weeds can act host plants for various pest and disease of crop plant, For example _____ in Cereals

Leaf curl virus

Rust

Mosaic

Blight

Weeds have more potential of seed production than field crops. For example, single plant of Bathu can produce approx. _____ seeds/plant, where as single wheat plant can only produce 200 seeds/plant

2000

1000

8000

3000

Horse power of Al-Ghazi model 640 is _____

75 hp

55 hp

65 hp

85 hp

One kanal is = _____ m^2

502

180

5444.8

25.10

After _____ harvesting land preparation for wheat is time and energy consuming process

Rice

Cotton

Cluster bean

Pear millet

Storage bacteria are active above _____ relative humidity

90

70

50

30

Storage life _____years, if seed moisture contest of cereals are 10-12%.

0.5

1

2

3

Around _____% moisture contents may also damage seeds due to extreme desiccation.

20

3

10

15

It is the application of the plant, soil, and related sciences to the improvement, production, and use of field crops.

Agriculture

Soil science

Agronomy

Botany

Seed or vegetative propagating material which is produced under the direct responsibility of the breeder

Breeder seed

Basic seed

Approved seed

Registered seed

Studies have revealed that the application of fertilizer contributes up _____% increase in crop yield

10

23

30

50

Tillage is derived from word Till means to _____

Irrigate

Cultivate

Harvest

Fertilize

Around _____% of the crop yields are lost if proper harvesting, threshing and storage is not practiced

20

10

40

50

Each day's delay in sowing of wheat after mid November to mid December results in reduction of _____ kg grain acre-1 day-1

5

10

15

25

In Barani areas, all nitrogen fertilizer is applied at _____

Ist irrigation

Sowing

Flowering

2nd irrigation

Land should be ----------in saline areas to avoid salt accumulation on raised soil.

Shallow ploughed

Well leveled

Pulverized

Potassium is most important on _____soils

Clay

Loam

Sandy

Organic

Shortly before sowing, irrigation is applied which is called _____

Ist irrigation

2nd irrigation

Irrigation at critical stage

Rauni

Tillage is one of the important mechanical methods of controlling _____

Rodents

Diseases

Weeds

Birds

The word Agronomy is derived from the two _____ words

Latin

English

Roman

Greek

_____ requires puddle soil so as to meet continuous water requirements

Rice

Tobacco

Cotton

Wheat

_____ results in breakdown of capillary action

Hoeing

Herbicide spray

Irrigation

Fertilizer

Phosphorous application is recommended at the time of _____ to stimulate early root growth

Flowering

Ist irrigation

2nd irrigation

Sowing

All of the weeds with limited life cycles depend on _____ reproduction for their survival

Sexual

Asexual

Sexual and asexual

None of them

If all the herbicides or their toxic products are degraded by the same mechanisms is termed as___

Target site-based cross resistance

Metabolic based cross resistance

Cross resistance

Single resistance

Which is not the category of biopesticides

Biochemical pesticides

Microbial residues

Plant-incorporated protectants

None of these

Bore two rows of holes down the infected tree, reaching the sap wood. In each hole a mixture of 8 g copper sulphate and 1 g 2,4-D powder is pushed in. This is chemical control of _____

Cuscuta

Striga

Orobanche

None of these

Exploitation of escape mechanism to manage weeds is the principle of _____

Zero tillage

Sowing date

All of these

Selection of quick growing crop/varieties

Method/scientific hypothesis not used to apply bio-agents is _____

Augmentation

Classical method

Abundation

None of these

The time between introduction of an invasive weed and when the population begins exponentially is called_____

Exponential phase

Lag phase

Colonization

None of these

Process whereby the rare resistant individuals become in majority is known as_____

Mechanism of resistance

Evolution of resistance

Reverse resistance

None of these

Contact herbicides move through _____ in plants

Xylem

Phloem

Roots

None of these

Successful weed control with tillage is determined by_____

Weeds reproduce sexually and asexually

Managerial skill

All of these

Inherent ability of a specie to survive and reproduce after herbicide treatment is called _____

Tolerance

Resistance

Susceptibility

None of these

Which of the following is not the potential advantage of natural products as herbicides?

Environmental hazard

Non-synthetic strategies

More selectivity

None of these

Which is the best program for small populations of noxious and perennial weeds?

Weed eradication

Weed prevention

Weed control

None of these

Strigol is extracted from the roots of_____

Striga

Cotton

Maize

Rice

Total destruction of common weeds is considered undesirable owing to their benefits e.g. _____

Harbour predators of crop pests

Forage value

Medicinal value

None of these

_____ is an example of parasitic weed.

Orbanche

Purple nutsedge

Wild onion

Itsit

_____ is the most common available form of water for absorption of plants.

Hygroscopic

Capillary

Gravitational

None of these

For green manuring, _____ crops should be preferred.

Short duration

Slow growing

Tap rooted

None of these

In order to improve the soil fertility_____ should be included in crop rotation.

Cereals

Fiber crops

Legumes

Sugar crops

The depth of irrigation water required for the full crop period excluding rainfall is called _____.

Delta of water

Duty of water

Consumptive use of water

Crop water requirement

Late emerging weeds usually lower the _____ of crop.

Establishment

Yield

Quality

All of above

_____ factors like humidity affect the grains during storage.

Physical

Chemical

Biochemical

None of these

_____ is generally recommended for unleveled and hilly areas.

Uncontrolled surface irrigation

Sub surface irrigation

Drip irrigation

All of above

Analytical, Verbal, Quantitative Reasoning

Verbal Questions.

(Antonyms)

Q1: CONFIDANT

assurance

enemy

confession

ally

Answer: enemy

Q2: REDUNDANT

irrelevant

prosaic

excessive

insufficient

Answer: insufficient

Q3: EXHUME

expel

exit

infer

inter

Answer: inter.

Q4: PALPABLE

pliable

facetious

intangible

careful

Answer: intangible

Q5: NEBULOUS

astronomical

distinct

hopeful
moribund
Answer: distinct

(Sentence Completion)

Q6: Pretending in his works to be gauche, uneducated, and _____, the real Chaucer was a sophisticated, widely read, and _____ man.
provincial . . . cosmopolitan
exiguous . . . vigorous
avuncular . . . shrewd
inept . . . dauntless
Answer: provincial . . . cosmopolitan

Q7: The _____ of Darwin's theory of evolution on Victorian religion was to create a bitter _____ of ideas and beliefs.
result . . . moderation
effect . . . conflict
extension . . . growth
influence . . . solidarity
Answer: effect . . . conflict

Q8: Churchill was cordial to Beria when they first met, but that was the last show of _____ between them.
charity
enmity
amiability
austerity
Answer: amiability

Q9: So _____ was the sales person's tone about the qualities of the new computer system that Najam nearly missed the _____ in its calculations in his budget.
Persuasive ... flaw
adopted ... accuracy

harsh ... amount
Answer: Persuasive ... flaw

Q10: The show is worth seeing for the _____ of Judy Convoy's vivacious performance, which _____ the stage whenever she appears.
effervescence . . . enlivens
verve . . . deforms
bravado . . . enervates
sprightliness . . . muffles
Answer: effervescence . . . enlivens

Q11: Alarmist newspaper stories present the pit bull terrier as _____ killer, but owners insist that the dog is friendly and _____.
an invidious . . . malleable
a malign . . . philanthropic
a ferocious . . . docile
a dissolute . . . venal
Answer: a ferocious . . . docile

Q12: America at Sea is a one-volume _____ history that covers the nation's military and commercial activities.
aquatic
ancient
meretricious
maritime
Answer: maritime

(Analytical Ability)

Q1: 36, 30, 24, 18, ?
22
12
21
11

Answer: 12

Q2: 7 9 12 14 17 19 22 ?
24
26
18
23
Answer: 24

Q3: 15 11 7 14 10 6
4
6
8
12
Answer: 12

Q4: 3 12 6 24 12 48
24
32
36
40

Answer: 24
Q5: 8 10 14 18 26
32
34
36
30
Answer: 34

(Quantitative Ability)

Q1: In the series 8, 9, 12, 17, 24 . . . the next number would be
29

30
33
35
Answer: 33

Q2: 42.98 + ? = 107.87
64.89
65.89
65.81
65.81
Answer: 64.89

Q3: A person's net income is $ 1373.70 and he pays an income tax of 5%. His gross income in dollars must be
1446
1118.96
1308.29
1438.25
Answer: 1446

Q4: A man sells two houses for $ 2 lac each. On one he gained 20% and on the other he lost 20%. His total profit or loss % in the transaction will be
4% profit
5% loss
no profit, no loss
4% loss
Answer: 4% loss

Q5: Rashid's salary was reduced by 20%. In order to restore his salary at the original amount, it must be raised by
20%
22.50%
25%
25%

Answer: 25%

Q6: \({x - 8 \over 24} = {3 \over 4} \)
What is the value of x in the equation?
10
20
26
31
Answer: 26

Q7: A boy scored 90 marks for his mathematics test. This was 20% more than what he had scored for the geography test. How much did he score in geography?
71 marks
73 marks
75 marks
77 marks
Answer: 75

Q8: A sum of money is divided among three persons, X, Y and Z, in the ratio 10:7:5. If Y gets $14 more than Z, how much will X get?
$ 70
$ 75
$ 73
$ 87
Answer: $70

Q9: A and B can reap a field in 30 days, working together. After 20 days, however, B is called away and A takes 20 days more to complete the work. B alone could do the whole work in
48 days
50 days
56 days
60 days
Answer: 60 days

Q10: During a month in 1970, a family spent $ 2500 on food. In 1980 in the same month the same family spent $ 3750 on food. What was the percentage increase in the money spent on food?

25%

50%

75%

80%

Answer: 50%

Analytical Reasoning

(For Q. 1-2) Seven piano students—T, U, V, W, X, Y, and Z—are to give a recital, and their instructor is deciding the order in which they will perform. Each student will play exactly one piece, a piano solo. In deciding the order of performance, the instructor must observe the following restrictions:

- X cannot play first or second.
- W cannot play until X has played.
- Neither T nor Y can play seventh.
- Either Y or Z must play immediately after W plays.
- V must play either immediately after or immediately before U plays.

Q. 1. If V plays first, which one of the following must be true?

T plays sixth.

X plays third.

Z plays seventh.

T plays immediately after Y.

Q. 2. If U plays third, what is the latest position in which Y can play?

first

second

fifth

sixth

(For Q. 3-4) From a group of seven people—J, K, L, M, N, P, and Q—exactly four will be selected to attend a diplomat's retirement dinner. Selection conforms to the following conditions:

- Either J or K must be selected, but J and K cannot both be selected.
- Either N or P must be selected, but N and P cannot both be selected.
- N cannot be selected unless L is selected.
- Q cannot be selected unless K is selected.

Q. 3. If P is not selected to attend the retirement dinner, then exactly how many different groups of four are there each of which would be an acceptable selection?

one

two

three

four

Q. 4. There is only one acceptable group of four that can be selected to attend the retirement dinner if which one of the following pairs of people is selected?

J and L

K and M

L and N

M and Q

(For Q. 5-6) On a particular Saturday, a student will perform six activities—grocery shopping, hedge trimming, jogging, kitchen cleaning, laundry, and motorbike servicing. Each activity will be performed once, one at a time. The order in which the activities are performed is subject to the following conditions:

- Grocery shopping has to be immediately after hedge trimming.
- Kitchen cleaning has to be earlier than grocery shopping.
- Motorbike servicing has to be earlier than laundry.
- Motorbike servicing has to be either immediately before or immediately after jogging.

Q. 5. If laundry is earlier than kitchen cleaning, then hedge trimming must be

fifth

fourth

third

second

Q. 6. Which one of the following, if substituted for the condition that motorbike servicing has to be earlier than laundry, would have the same effect in determining the order of the student's activities?

Laundry has to be one of the last three activities.

Laundry has to be either immediately before or immediately after jogging.

Jogging has to be earlier than laundry.

Laundry has to be earlier than hedge trimming.

(For Q. 7-9) Aslam has to study four books (English, Physics, Chemistry and Biology) on four different days from Thursday to Sunday. The order of Books is as follows:

- Chemistry is studied on day before the day of English.

- Biology is studied on day after the day of Physics

Q. 7. Which of the following is correct order of books?

Chemistry, Biology, English, Physics

Biology, Chemistry, English, Physics

Physics, Chemistry, Biology, English

English, Chemistry, Biology, Physics

Q. 8. If Aslam studies Chemistry on Saturday, which subject he has studied on Thursday?

English

Biology

Physics

Either English or Physics

Q. 9. Which one of the following is not possible?

Chemistry on Thursday

Physics on Sunday

Physics on Thursday

Biology on Saturday

Q. 10-14. Five cartoon videos A, B, C, D, E are to be played to kids in a sequence meeting the condition given below:

- A must be played earlier than C
- B must be played earlier than D
- E must be fifth video played.

Q. 10. Choose the correct sequence of videos played to kid

A, C, D, D, E

A, E, D, C, B

B, D, C, A, E

B, D, C, A, E

Q. 11. If C is played earlier than E, then which one of following will be true?

A is the first video played.

C is the third video played.

D is the fifth video played.

B is the second video played.

Q. 12. Which videos CANNOT be played earlier than E?

A and D

A and B

C and D

B and C

Q. 13. If D and E are played far apart from each other (as much as possible), which one stands true?

A is played earlier than B

E is played earlier than B

B is played earlier than C

C is played earlier than E

Q. 14. If B, D, and E are played one after another in sequence, when can A be played in the remaining two positions?

First and second

First and fourth

Third and fifth

Second and third

Q. 15. A, B, C and D are four persons of a family. A is daughter of B. B is son of C. C is father of D. Which statement in the following is true?

D and B are brothers

A is the daughter of D

If D is the daughter of B, then A and D are sisters

C is uncle of A

Analytical reasoning

For question 1 to 3

A volunteer uses a truck to pick up donations of unsold food and clothing from stores and to deliver them to locations where they can be distributed. He drives only along a certain network of roads. In the network there are two-way roads connecting each of the following pairs of points: 1 with 2, 1 with 3, 1 with 5, 2 with 6, 3 with 7, 5 with 6, and 6 with 7. There are also one-way roads going from 2 to 4, from 3 to 2, and from 4 to 3. There are no other roads in the network, and the roads in the network do not intersect. To make a trip involving pickups and deliveries, the volunteer always takes a route that for the whole trip passes through the fewest of the points 1 through 7, counting a point twice if the volunteer passes through it twice. The volunteer's home is at point 3. Donations can be picked up at a supermarket at point 1, a clothing store at point 5, and a bakery at point 4. Deliveries can be made as needed to a tutoring center at point 2, a distribution

center at point'6, and a shelter at point 7.

Q1: If the volunteer starts at the supermarket and next goes to the shelter, the first intermediate point his route passes through must be

2

3

5

6

7

Answer:3

Q2: If, starting from home, the volunteer is then to make pickups for the shelter at the supermarket and the bakery (in either order), the first two intermediate points on his route, beginning with the first, must be

1 and 2

1 and 3

2 and 1

2 and 4

4 and 2

Answer: 1 and 2

Q3: If, starting from the clothing store, the volunteer next is to pick up bread at either the supermarket or the bakery (whichever stop makes his route go through the fewest of the points) and then is to go to the shelter, the first two points he reaches after the clothing store, beginning with the first, must be

1 and 2

1 and 3

4 and 2

6 and 2

6 and 4

Answer: 1 and 3

For question 4 to 5

There are seven cages next to each other in a zoo. The following is known about the cages. Each cage has only one animal, which is either a monkey or a bear. There is

a monkey in each of the first and last cages. The cage in the middle has a bear. No two adjacent cages have bears in them. The bear's cage in the middle has two monkey cages on either side. Each of the two other bear cages are between and next to two monkey cages

Q4: How many cages have monkeys in them?

2

3

4

5

6

Answer:4

Q5: The bear cage in the middle must have

No other bear cage to its left

No monkey cage on its right.

A bear cage to its left and to its right

Other bear cages next to it.

No monkey cage to its left.

Answer: A bear cage to its left and to its right

For question 6 to 8

A nursery class in a school has a circular table with eleven seats around it. Five girls (Kiran, Lado, Maryam, Omera and Parveen) and five boys (Farhan, Ghaus, Haris, Imdad and Jahangir) are seated around the table. None of the girls are seated in a seat adjacent to another girl. Kiran sits between Farhan and Ghaus, and next to each of them. Jahangir does not sit next to Imdad.

Q6: Which of the following is a possible seating order around the table?

Empty seat, Farhan, Kiran, Ghaus, Lado, Omera, Haris, Imdad, Parveen, Jahangir, and Maryam.

Empty seat, Farhan, Kiran, Ghaus, Lado, Jahangir, Parveen, Omera, Imdad, Maryam, Haris.

Empty seat, Farhan, kiran, Ghaus, Omera, Jahangir, Parveen, Imdad, Maryam, Haris, Lado.

Empty seat, Omera, Farhan, Kiran, Ghaus, Lado, Jahangir, Imdad, Parveen,

Haris, Maryam.
Empty seat, Maryam, Farhan, Kiran, Ghaus, Lado, Jahangir, Perveen, Imdad,
Omera, Haris.
Answer: E: Empty seat, Maryam, Farhan, Kiran, Ghaus, Lado, Jahangir, Perveen, Imdad, Omera, Haris.

Q7: If Lado, Haris, Maryam, Jahangir, and Ghaus are seated in that order, which of the following is a correct completion of the seating order after Ghaus?
Kiran, Farhan, Omera, Imdad, Parveen, empty seat.
Kiran, Farhan, Imdad, Omera, empty seat, Parveen
Farhan, Parveen, Kiran, Imdad, Omera, empty seat.
Kiran, Farhan, Parveen, Imdad, empty seat, Omera.
Kiran, Farhan, Omera, empty seats, Parveen, Imdad.
Answer: Kiran, Farhan, Omera, Imdad, Parveen, empty seat.

Q8: If Jahangir leaves his seat and occupies the empty seat, his new seating position would be between:
Farhan and Kiran
Maryam and Ghaus
Kiran and Ghaus
Imdad and Lado
Parveen and Lado
Answer: Parveen and Lado

For question 9 to 10
Four telephone operators (Abid, Baqir, Chauhan, and Daud) each have to perform duties at the telephone exchange on four different days, Thursday through Sunday. The following is known about their duty schedule: Chauhan has his duty day before Abid. Daud has his duty day later than Baqir.

Q9: Which of the following is a possible order of duty days for the four operators?
Chauhan, Daud, Abid and Baqir.
Daud, Chauhan, Abid, and Baqir.
Baqir, Chauhan, Daud and Abid.

Abid, Chauhan, Daud and Baqir.

Abid, Baqir, Daud and Chauhan.

Answer: Baqir, Chauhan, Daud and Abid.

Q10: If Chauhan has his duty day on Saturday, who must have his duty day on Thursday?

Either Abid or Daud.

Daud

Abid

Either Baqir or Daud.

Baqir.

Answer: Baqir

Verbal reasoning

Q1: Multan _____ a very hot climate.

Has

Have

Has been

With

Answer: Has

Q2: One of the least effective ways of sorting information is learning _____ it.

Repeat

Repeating

To repeat

how repeat

Answer: To repeat

Q3: Salman finished_____ two of his published compositions before his twelfth birthday.

Written

Writing

To write

Wrote

Answer: Writing

Q4: Sofia _____ collect stamps, but now she has other interests.

Used to

Was used to

Used to be

Using to

Answer: Used to

Q5: After passing through a great trauma of her husband's death, she _____ hard to achieve mental relaxation.

Struggled

Struggling

Struggle

To struggle

Answer: Struggled

Q6: In partnership with Pakistan, South Korea _____on Motor way.

Helped worked

Helping work

Helped working

To help working

Answer: Helped working

Q7: We will wait if you _____ go.

Wanted to

Want

Want to

Wanting to

Answer: Want to

Q8: If I had more time I _____ checked my paper.

Would have

Would

Would had

Will have

Answer: Would have

Q9:I thought that he_____ coming today.

Has been

Is

Was

Has

Answer: Was

Q10: That professor enjoys teaching and _____.

Writing

Written

To write

Write

Answer: Writing

Quantitative reasoning

Q1. A piece of wood 35 feet, 6 inches long was used to make 4 shelves of equal length. The length of each shelf was

9 feet, 1 1/2 inches

8 feet, 10 1/2 inches

7 feet, 10 1/2 inches

7 feet, 1 1/2 inches

6 feet, 8 1/2 inches

Answer: 8 feet, 10 1/2 inches

Q2. The tiles in the floor of a bathroom are 15/16 inch squares. The cement between the tiles is 1/16 inch. There are 3240 individual tiles in this floor. The area of the floor is

225 sq. yds.

2.5 sq. yds.

250 sq. ft.

22.5 sq. yds

225 sq. ft.

Answer: 2.5 sq. yds.

Q3.A man bought a TV set that was listed at $160. He was given successive discounts of 20% and 10%. The price he paid was

$129.60

$119.60

$118.20

$115.20

$112.00

Answer: $115.20

Q4. Mr. Jones' income for a year is $15,000. He pays 15% of this in federal taxes and 10% of the remainder in state taxes. How much is left?

$12,750

$9,750

$14,125

$13,500

$11,475

Answer: $11,475

Q5. The radius of a circle which has a circumference equal to the perimeter of a hexagon whose sides are each 22 inches long is closest in length to which one of the following?

7

21

14

28

24

Answer: 21

Q6. If a, is a multiple of 5 and b = 5a, which of the following could be the value of a + b?

60 II. 100 III. 150

I only

III only

I and III only

II and III only

None of these

Answer: I and III only

Q7. Which of the following expressions has the greatest value?

$4 \times 4 \div 4 + 4$

$4 \div 4 \times 4 + 4$

$4 \times 4 – 4 \times 4$

$4 \div 4 + 4 \times 4$

$2 \div 2 + 2 \times 2$

Answer: $4 \div 4 + 4 \times 4$

Q8. If (a + 3) / 5 is an integer, what is remainder when ‘a’ is divided by 5?

1

2

3

4

5

Answer:2

Q9. The integral part of logarithm is called

Characteristic

Mantissa

Solution

Root

None of these

Answer: Solution

Q10. On the y-axis, the x-coordinate is

1

∞

zero

-∞

–1

Answer: -∞

Analytical reasoning, Quantitative and Verbal Reasoning

There are 5 villages A, B, C, D and E. Two of these are on the Highway and each have a school. The population of one of them is less than 3000. Out of these two, one village also has a school and its population is more than 3000, has no school. In one village, having population of more than 3000 and a school, there is a post office. There is a police station in one of the villages, which has a population of more than 3000 and which lies on the Highway. Village 'A' has a school and its population is less than 3000. There is no school in village 'B' and it does lie on the Highway. 'C' lies on the Highway and its population is more than 3000. Population of 'D' is less than 3000 and village 'E' neither lies on the Highway nor it has a post office. On the basis of the above information, answer the questions from 1 to 5.

Q1: Other than 'C' which village lies on the Highway?

B

E

D

A

Answer: D

Q2: Which village, with a population of less than 3000, has no school?

B

E

D

C

Answer: D

Q3: Which village, not lying on the Highway, has a school?

B

E

D

C

Answer: C

Q4: Which village has a police station?

C

E

B

D

Answer: D

Q5: Which village with a population of more than 3000 has no school?

E

B

D

C

Answer: E

Q6: Successive discounts of 10% and 15% is equivalent to a single discount of

22%

23.50%

25%

24.50%

Answer: 23.50%

Q7: 7/8 of 96 is:

72

76

80

84

Answer: 84

Q8: A train travelled a distance of 6,000 km from Lahore to Karachi in 22 hours. And during travel from Karachi to Lahore the train got late due to engine failure and reached Lahore in 28 hours. What is the average speed of train?

180 km/hr

200 km/hr

220 km/hr

240 km/hr

Answer: 240 km/hr

Q9: What is the percent profit made on the sale of 1000 shares of stock bought at Rs. 10 per share and sold at Rs. 12 per share?

2%

0.20%

25%

20%

Answer: 20%

Q10: The area of the circle is 16?. The length of the diameter of the circle is:

8

16

4

32

Answer: 8

Q11: We cannot predict whether he will go on a picnic or not. He is so _____

Deleterious

Offensive

Feckless

Capricious

Answer: Capricious

Q12: Don't think there are no crocodiles because the water is calm. This is a:

Simple Sentence

Compound sentence

Complex sentence

Mixed sentence

Answer: Compound sentence

Q13: TENET:

Foe

Stable

Improvement

Dogma

Answer: Dogma

Q14: Yauld:

Powerful

Vigorous

Energetic

Weak

Answer: Vigorous

Q15: The state Govt. staff ___ threatened to launch an indefinite strike from next month to ___ their demands:

Have, Press

Were, Meet

Did, Get

Had, Encounter

Answer: Have, Press

VERBAL REASONING MCQS

Choose the word that is most nearly similar in meaning to the word in capital letters.

1. INTEGRITY

A. questioning
B. transparency
C. honesty
D. sadness

ANSWER: C

2. PREROGATIVE

A. interrogative
B. right
C. wise
D. casual

ANSWER: B

Choose the word that is most nearly opposite in meaning to the word in capital letters.

3.RESTIVE

A. easy
B. calm
C. hurry
D. restless

ANSWER: A

4. PRODIGAL

A. wasteful
B. confident
C. neutral
D. frugal

ANSWER: D

Choose the pair of words that best expresses a relationship similar to that expressed in the pairs of words in capital.

5. TIGER : CARNIVOROUS

A. lion : jungle
B. cat : house
C. cow : herbivorous
D. wolf : clever

ANSWER: C

6. CONSTELLATION : STARS

A. archipelago : islands
B. city : country
C. book : pen
D. school : education

ANSWER: A

Fill in the blanks with suitable choices.

7. We cannot predict whether he will go on a picnic or not. He is so _____ .

A. deleterious
B. offensive
C. feckless
D. capricious

ANSWER: D

8. He is _____ fame and money. He pursues research just as an amateur scientist.

A. indifferent to
B. enamoured of
C. running for
D. struggling for

ANSWER: A

9. Octopuses have not only large brains _____ also a well-developed nervous system.

A. but
B. and
C. are
D. and have

ANSWER: A

10. I hardly _____ meet him.

A. ever
B. never
C. had ever
D. had never

ANSWER: A

QUANTITATIVE REASONING MCQS

1. 4+4-4*4/4=

A. 0
B. 1
C. 4
D. 8

ANSWER: C

2. 7/8 of 96 is

A. 72
B. 76
C. 80
D. 84

ANSWER: D

3. If x+3y=12 and -2x-4y=24 then what are the values of x and y?

A. x=24 y=60
B. X=60, y=24
C. X=-24, y=60
D. X=24, y=-60

ANSWER: B

4. If $f(x)=2x^2-2x-1$ then f(-1)=?

A. 0
B. 1
C. 2
D. 3

ANSWER: D

5. What is the 101st term of the sequence: 1, 4 7, 10, …. ?

A. 281
B. 291
C. 301
D. 311

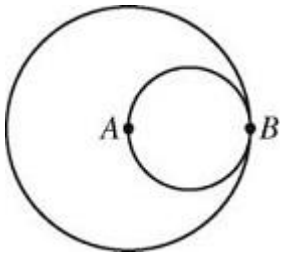
ANSWER: C

6. What is the sum of the sequence: 10, 20, 30, 40, …. , 1000 ?

A. 50,000
B. 50,500
C. 60,000
D. 60,500

ANSWER: B

7. Consider the larger circle and an inner circle. Point A is center of larger circle. If the line AB (not drawn) is 7 cm in length, then what is the area of larger circle.



A. 154 cm
B. 136 cm
C. 112 cm
D. 94 cm

ANSWER: A

8. A train traveled a distance of 6,000 km from Lahore to Karachi in 22 hours. And during travel from Karachi to Lahore the train got late due to engine failure and reached Lahore in 28 hours. What is the average speed of train?

A. 180 km/hr
B. 200 km/hr
C. 220 km/hr
D. 240 km/hr

ANSWER: D

9. If 6 men can complete a work in 15 hours. Then how many hours it will take if 10 men working on the same speed completes the work?

A. 7
B. 8
C. 9
D. 10

ANSWER: C

10. The ages of Sohail, Afzal and Bilal are 17, 16 and 12 respectively. If the age of Aslam also included the average of the ages is increased by 5. What is the age of Aslam?

A. 32
B. 33
C. 34
D. 35

ANSWER: D

ANALYTICAL REASONING

Questions 1-2 In an in vitro st dy , 160 white cats were injected with Salt X . 160 other white cats were injected with placebo . In two weeks , 39% of the white cats , who were injected with Salt X showed symptom . of Kay fever ? Hence , it can be concluded that Kay fever i caused by some elements similar to the elements in Salt X

1. Which of the following statements would most seriously weaken the above discussion? suffering from Kay fever are the victims of the golden viper of B One among the 160 white cats had akeady showed symptoms of Kay fever prior to the experiment

A. The natural habitats of white cats does not contain any of the elements found in Salt X

B. The 160 white cats used in the experiment were kept isolated from each other.

C. The scientists administered the injections being ignorant of the contents of the salt used.

ANSWER: B

2. Which of the following would most strengthen the argument above?

A. Some of the elements in Salt X are extracted from the root of a certain poisonous herb of Hunza.

B. The blood test of the victims of Kay fever revealed the presence of a toxic element in their blood, normally found in salt X.

C. Almost all the white cats died within two days after the first symptom appeared.

D. Normally the rate of Kay fever among white cats is less than 0.01%. E. Within two weeks, about 40% of the white cats, who were injected with placebo, also contracted Kay fever.

ANSWER: B

3. Wall chalking on public property should be outlawed. Radicals and fanatics have no right to use public property when promoting their unsavory views. The argument above is based on the idea

A. The general public has an interest in the free exchange of different political views.

B. Every person who uses wall chalking for the promotion of ideas is a radical or fanatic.

C. Radicals and fanatics prefer the use of public property while propagating their viewpoint.

D. Legal constraints should be equal for all E. Any promotional activity, which is against public interest, should be protected by law.

ANSWER: B

Questions 4 - 5

One's ability to a ljust in environment successfully leads to happiness. War at a universal level destroys the weaker people, who are the most unable to adjust to their environment. Thus, war at the universal level puts weaklings out of their misery and allows more space for their predators to enjoy life in a better manner. As those actions have to be performed, which maximize the level of happiness of the greatest number, war at a universal level should take place.

4. The author's discussion would be greatly weakened, if he agreed to which of the following? 1- Technology could change the environment. II- War at the universal level would be an integral part of the environment. III- It is possible for the strong to survive without suppressing the weak.

A. I only

B. Il only

C. Ill only

D. I and III only

E. I, II and III only

ANSWER: A

5. What response would the author of the above discussion come up with, in the cuse of the objection that the weaklings far exceed strong people? 1. He would respond with the statement that the person making thu objection is a weakling II - He would respond by saying that weaklings will be miserable no matter what happens. III. He would respond with the statement that the strong would be frustrated if the weaklings are destroyed.

A. I only

B. II only

C. Ill only

D. I and II only

E. II and III only

ANSWER: E

6. If Rubina was born in NWFP, then she is a citizen of Pakistan. The statement above can be deduced from which of the following statements? A. Every citizen of the Pakistan is resident either of one of the province or of one of the tribal area.
B. Rubina was born either in NWFP or in Sindh.
C. Some people born in NWFP are citizens of Pakistan.
D. Everyone born in Pakistan is a citizen of Pakistan.
E. Rubina is a citizen either of Pakistan or of any other country.

ANSWER: E

Questions 7-8
Follow us to the real Pakistan leaving behind the disturbances of civilization. Real Pakistan is still inhabited by the eagle, the cow, the black deer, and tigers; it is still spacious, sprawling, and majestic. Experience the freedom and serenity still to be found in

7. Choose the best option to complete the above statement:
A. the natural beauty of our land
B. the fascinating urban centers
C. the wild terrain of NWFP
D.one's own subconscious
E. the great sprawling cities of the upper Pakistan

ANSWER: A

8. The above paragraph is most likely to appear in which of the following? A. A Guide to Wild life in Pakistan
B. Exploring the Great Outdoors
C. The Quiet Beauty of Harppa
D. How the Eagle Became Extinct
E. Retaining to Paistan

ANSWER: D

9. In 1970, Shaheen Inn earned Rs. 10 million in hotel business. By 1990, revenue doubled and in 2000, it reached the sum of Rs. 40 million. Each the following, if true, may explain the trend in hotel business except: A, The number of total hotel rooms has increased.

B. Avere ge expenditure per room has increased.

C. The number of customers has increased from 1970 to 1990.

E. Average stay per customer has increased.

F. The average price of customer services has increased.

ANSWER: A

10. If I am elected, I will fight for changes effecting the growth and prosperity of the poor. We will work together to do away with the bureaucratic bogs which have existed ever since my opponent took office. Every one of you knows what I stand for; I invite my opponent to.....

A. Extend his support to me

B .make his mind clear

C. stop lying to the public

D. hand in his resignation graciously

E. get our city more federal aid

ANSWER: B