BIOLOGY

NEET & AIIMS

STRATEGIES FOR ENHANCEMENT IN FOOD PRODUCTION

Example

1. Mark whether the following statements are true or false. (i) Entire collection of plants or seeds having all the diverse alleles for all genes in a

given crop is called gene pool. (ii) A wide range of pathogens affect the yield of cultivated crop species, especially in tropical climates. (iii) High aspartic acid, low nitrogen and sugar content in maize lead to resistance to aphids. (iv) Biofortification is the most practical means to improve public health.

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2. Indicate whether the following statement are true or false. Rectify each false statement to make it true.

(i) One of the alternate sources of protein for animal and human nutrition is single cell protein.

(ii) It has been calculated that a 250 g cow produces 200 g of protein per day.

(iii) Techniques of tissue culture and somatic hybridization offer cast potential for manipulation of plants in-vivo to produce new varieties.

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Try Yourself

1. Identify true or false statements

(i) Conventional plant breeding is in practice from $9,000-11,000$ years ago.

(ii) Recombinant progeny is self -pollinated for several generations till they reach a state of heterozygosity

(iii) During the period 1960 to 2000 wheat production increased from 35 million tonnes to 89.5 million tonnes.

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2. Fill in the blanks with appropriate words.

(i) Resistance to the most plants is the ability to prevent the pathogen from causing disease and is determined by the _____.

(ii) Smooth leaved and _____ cotton vaneties do not attract bollworms.

(iii) It has been possible to develop and iron fortified _____ variety containing over five times as much iron as commonly consumed verieties.

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3. Mark true false the following statements.

(i) The shift from grain to meat creates more demand for cereals

(ii) Spirulina can be grown easily on meterials like waste water from potato processing plants straw molasses etc. to produce large quantities and can serve as food rich in liquid and minerals.

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4. Fill in the blanks with suitable words in following statements.

(i) Method of producing of plants through tissue culture is called _____.

(ii) Recovery of healthy plants from diseased plant is possible by using _____ as explant in tissue culture.

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5. Name the animals that have been used by humans as a source of food

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6. Rearing , caring and feeding of domesticated animals is known as

A. rearing

B. animal husbandary

C. artificial insemination

D. none of the above

Answer:

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7. Cross between which animals lead to the production of mule?

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8. Fill in the blank

Inbreeding as a rule increases _____

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9. The hormone injected to cow to induce follicular maturation and superovulation is having

_____ like activity

A. estrogen

B. progesterone

C. testosterone

D. FSH

Answer:

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10. In MOET, at how many cells stage fertilised eggs are recovered from the super ovulated

female?

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11. Which is the most common species of honeybee reared in hives?

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12. List any two economically important products for humans obtained from Apis indica.

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13. Name any two edible marine water fishes

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14. What is Blue revolution?

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Exercise

1. Which of the following step is the backbone of plant breeding programme ?

A. Cross hybridisation

B. Germplasm collection

C. Selection of superior hybrids

D. Selection of parents

Answer: B

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2. Hybridisation between the two varieties of same species is known as

A. Intraspecific

B. Intravarietal

C. Interspecific

D. Intergeneric

Answer: A

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3. Which of the following variety of rice has been produced by the hybridisation of Oryza japonic and O. indices ?

A. Jagannath

B. Aruna

C. ADT-37

D. Reimei

Answer: C

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4. In India, seeds of desirable plants are certified by

A. ICRISAT

B. NSC

C. IARI

D. NBPGR

Answer: B

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5. Sonora-64 and Lerma Rojo-64 were brought to india from Mexico and modified through

A. UV-rays

B. X-rays

C. β-rays

D. γ-rays

Answer: D

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6. Taichung Native I variety of rice was developed in which of the following country ?

A. Taiwan

B. Japan

C. Mexico

D. America

Answer: A

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7. Tropical canes of South India belonging to Saccharum officinarum had

A. Poor sugar content

B. Thick stem

C. Thin stem

D. Poor yield

Answer: B

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8. Match the column I with column II

Column I (Variety)	Column II (Plant)
a. Jaya	(i) Wheat
b. Sonalika	(ii) Barley
c. Ganga	(iii) Rice
d. Erectiferum	(iv) Maize

A. a(iii), b(i), c(ii), d(iv)

B. a(i), b(iii), c(ii), d(iv)

C. a(iii), b(i), c(iv), d(ii)

D. a(iii), b(ii), c(iv), d(i)

Answer: C

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9. In mung bean , resistance to yellow mosaic virus and powdery mildew were induced by

A. Polyploidy

B. Mutations

C. Selection

D. Hybridisation

Answer: B

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10. Select the incorrect match

A. Protina variety : Maize

B. Triticum aestivum : Bread wheat

C. Mexican wheat : HUW - 468

D. Atlas 66 : Used as a donor for improving cultivated wheat

Answer: C

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11. Find the incorrect match w.r.t single cell protein

A. Algae : Scendesmus

B. Fung : Fusanum

C. Bacteria : Candida

D. Bacteria : Methylophilus

Answer: C

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12. 3-10 kg of grain can produce _____ of meat by animal farming.

A. 250 gm

B. 1 kg

C. 250 kg

D. 10 kg

Answer: B

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13. Plant part used for tissue culture is sterilized by

A. Chemicals

B. Heat

C. UV-rays

D. Nutrient media

Answer: A

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14. The ability of a plant cell to give rise to a complete plant is called

A. Totipotency

B. Pluripotency

C. Hardening

D. Protoplast fusion

Answer: A

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15. The process of transferring the cell-culture from old medium to fresh culture medium is known as :-

A. Callus culture

B. Suspension culture

C. Subculturing

D. Hardening

Answer: C

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16. Gynogenic haploids are produced by using

A. Unfertilized ovules

B. Fertilized ovules

C. Somatic embryo

D. Shoot apex

Answer: A

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17. During the somatic hybridisation, the cells are treated with enzymes

A. PEG

B. Cellutase, pectinase

C. Electrofusion

D. All of these

Answer: B

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18. Pomato is an intergeneric somatic hybrid of

A. Potato and Brinjal

B. Potato and Tomato

C. Tomato and Brinjal

D. Potato and Tabacco

Answer: B

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19. In tissue culturem plant genetically identical to the parental plant is called

A. Synkaryon

B. Explant

C. Sexual hybrid

D. Somaclone

Answer: D

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20. Find the odd one w.r.t somaclonal variations

A. Produced during tissue culture

B. Some may be useful and stable

C. All are useful and very stable

D. Some of the significant variations have been taken up in plant breeding

Answer: C

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21. Bacillius anthracis causes

A. Rinderpest

B. Tick fever

C. Anthrax

D. Diarrhoea

Answer: C

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22. Which one of the following is a viral disease of poultry?

A. Coryza

B. New Castle disease

C. Pasteurellosis

D. Salmonellosis

Answer: B

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23. Bull semen is stored for artificial insemination in

A. Ice

B. Liquid carbon dioxide

C. Liquid oxygen

D. Liquid nitrogen

Answer:

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24. The scientific name of zebu is

A. Bos indicus

B. Gallus gallus

C. Bubalus bubalus

D. Bombyx mori

Answer: A

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25. One of the following is a disease of poultry:

A. Anthrax

B. Ranikhet

C. Foot and mouth disease

D. Pebrine

Answer: B

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26. Frieswal is a crossbreed of

A. Brown swiss and Sahiwal

B. Tharparkar and Holstein-Friesian

C. Holstein Friesian $\times$ Sahiwal

D. Jerset $\times$ Sahiwal

Answer: C

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27. In poultry , coccidiosis is caused by

A. Virus

B. Fungus

C. Helminth parasite

D. Protozoan

Answer: D

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28. Animal husbandry is

A. Agricultural practice of breeding and raising the livestock

B. Deals with care and breeding of livestock like buffaloes, cows, pigs, horses, sheep, goat etc

C. Is a vital skill for farmers and is as much science as it is an art

D. All of these

Answer: D

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29. Hisardale a new breed of sheep developed in Punjab by crossing Bikaneri ewes and Merino rams is an example of

A. Outcrossing

B. Cross-breeding

C. Interspecific hybridisation

D. Outbreeding

Answer: B

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30. Inbreeding depression can be overcome by

A. Mating of animals of same breed, but having no common ancestors on either side of their pedigree upto 4-6 generations

B. Mating males of one breed with superior females of another breed

C. Interspecific hybridisation

D. All of these

Answer: A

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31. The most common species of honey bee reared in India, is

A. Apis florea

B. Apis dorsata

C. Apis indica

D. Apis mellifera

Answer: C

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32. Which of the following industry is devoted to the catching, processing or selling of fish, shellfish or other aquatic animals?

A. Aquaculture

B. Inland Fishery

C. Fishery

D. Pisciculture

Answer: C

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33. Which of the following are edible marine fishes?

A. Catla, Rohu, Clarias

B. Hilsa, Mackerels, Pomfrets

C. Heteropneustes, Wallago, Catla

D. Labeo, Calbasu, Singhi

Answer: B

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34. Which of the following are important for successful bee-keeping?

A. Knowledge of the nature and habits of bees

B. Catching and hiving swarms

C. Management of bee-hives during different seasons

D. All of these

Answer: D

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35. Isinglass in used for

A. Production of Insulin

B. Feeding cattle, pig and poultry

C. Preparation of paints and varnishes

D. Clarificationof vinegar, wines and beer

Answer: D

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36. Cod liver oil is a rich source of

A. Vitamin B

B. Vitamin K

C. Vitamins A and D

D. Vitamin C

Answer: C

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37. From which stage of silk moth, the silk is obtained?

A. Cocoon

B. Adult

C. Larva

D. Egg

Answer: A

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38. The term 'aquaculture' means

A. Inland fisheries

B. Aspergillosis

C. Marine fisheries

D. Both (1) & (3)

Answer: D

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39. Which of the following is not true?

A. Fish meal is rich source of protein for cattle and poultry

B. Fish meal is produced from the non-edible parts of fishes

C. Silver revolution is increases in fish production

D. Shagreen is the skin of shark

Answer: C

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40. Fish flour is rich in

A. Fat

B. Proteins

C. Vitamins

D. Minearls

Answer: B

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Assignment Section A

1. See the given steps that are related to plant breeding:

(a) Selection and testing of hybrid

(b) Selection of parents

(c) Germplasm collection

(d) Crossing among selected parents

(e) Testing and release of new cultivars

Select the correct order for these steps

A. $b \rightarrow c \rightarrow d \rightarrow e \rightarrow a$

B. $c \rightarrow b \rightarrow d \rightarrow a \rightarrow e$

C. $c \rightarrow b \rightarrow a \rightarrow d \rightarrow e$

D. $a \rightarrow b \rightarrow c \rightarrow d \rightarrow e$

Answer: B

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2. India is mainly an agricultural country . Agriculture accounts for approximately _____ of india's GDP.

A. $18\ \%$

B. $33\ \%$

C. $40\ \%$

D. $42\ \%$

Answer: B

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3. The agriculture sector of India employs:

A. $50\ \%$ of population

B. $70\ \%$ of population

C. $30\ \%$ of population

D. $62\ \%$ of population

Answer: D

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4. P-1542 variety of the plant belongs to

A. Wheat

B. Maize

C. Brassica

D. Pea

Answer: D

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5. _____is the root of any breeding programme.

A. Mutation

B. Micropropagation

C. Genetic variability

D. Testing and commerciallsation of new cultives

Answer: C

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6. Select the incorrect statement(s) (w.r.t semi-dwarf varieties of wheat)

A. Developed by Norman E. Borlaug

B. Developed at international Centre for Wheat and Maize Improvement in Mexico

C. These varieties were derived from IR - 8

D. Responsible for green revolution

Answer: C

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7. International Rice Research Institute (IRRI) is located at :

A. Mexico

B. Philippines

C. Taiwan

D. Canada

Answer: B

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8. Taichung Native I variety of rice was developed in which of the following country ?

A. Taiwan

B. Japan

C. Mexico

D. America

Answer: A

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9. IR-8 variety belong to

A. Rice

B. Wheat

C. Maize

D. Sugarcane

Answer: A

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10. Semi-dwarf rice varieties were introduced in India in

A. 1976

B. 1966

C. 1986

D. 1970

Answer: B

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11. Select the incorrect statement w.r.t Saccharum officinarum

A. It is a tropical cane

B. It has low sugar content

C. It had thicker stem

D. It did not grow well in north India

Answer: B

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12. Select correct statement w.r.t Saccharum barberi

A. Originally grown in north India

B. They have high sugar content

C. They have high yield per unit area of the field

D. Presence of thicker stem as compared to S. officinarum

Answer: A

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13. Match the column I with column II

	Column I (Variety)	Column II (Plant)
a.	Sonalika	(i) *Brassica*
b.	Parbhani Kranti	(ii) Wheat
c.	Pusa Komal	(iii) Bhindi
d.	Pusa Gaurav	(iv) Cowpea

A. a(ii), b(iv), c(iii), d(i)

B. a(i), b(ii), c(iii), d(iv)

C. a(ii), b(iii), c(iv), d(i)

D. a(iii), b(iv), c(i), d(ii)

Answer: C

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14. In mung bean , resistance to yellow mosaic virus and powdery mildew were induced by

A. Tissue culture

B. Mutations

C. Selection

D. Hybridisation

Answer: B

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15. Select the variety developed by mutation breeding

A. Pusa Swarnim

B. Parabhani Kranti

C. Pusa Sadabahar

D. Sharbati Sonara

Answer: D

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16. _____ is the process by which genetic variation are created through changes in the base sequence within genes.

A. Somatic hybrid

B. Micropropagation

C. Mutation

D. Polyploidy

Answer: C

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17. Plant variety himgiri is resistant to

A. White rust

B. Masaic virus

C. Bacterial blight

D. Leaf and stripe rust

Answer: D

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18. Insect resistance in host crop may be due to

A. Physiological but not due to morphological character

B. Morphological, biochemical or physiological character

C. Biochemical but not due to morphological character

D. Morphological but not due to biochemical character

Answer: B

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19. Resistance to jassids in cotton is related to following character of cotton

A. Morphological

B. Physiological

C. Biochemical

D. Biochemical and physiological

Answer: A

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20. Maize generates resistance against stem borers by having

A. High aspartic acid and high nitrogen content

B. Low nitrogen and low sugar content

C. Low sugar content and low aspartic acid

D. More than one is correct

Answer: B

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21. Hairy leaves in cotton provides

A. Bollworm

B. Sawfly

C. Jassids

D. Fungal infection

Answer: C

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22. Smooth leaved and nectar less cotton varieties do not attract which one of following pests

A. Bacteria

B. Fungi

C. Sawfly

D. Bollworm

Answer: D

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23. Resistance to cereal leaf beetle in wheat is due to

A. Smooth leaved trait

B. High aspartic acid

C. Solid stem

D. Hairy leaves

Answer: D

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24. _____ people in the world do not have adequate food to meed their daily requirements.

A. 5 million

B. 3 billion

C. 840 million

D. 10 miilion

Answer: C

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25. Atlas -66 is

A. Maize variety

B. Wheat variety with high protein content

C. Brassica variety with resistance against aphids

D. Cowpea variety with resistance against bacterial blight.

Answer: B

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26. What is meant by single cell protein ?

A. Protein synthesised by skin cell

B. Unique protein synthesised by liver cell

C. Protein synthesised by microorgasnisms

D. Unique protein synthesised by plant body

Answer: C

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27. Prokaryote that is considered as source of SCP is

A. Rhizobium

B. Frankia

C. Streptococcus

D. Spirulina

Answer: D

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28. Choose correct option w.r.t tissue culture

A. The whole plant can be regenerted from explant

B. Only apical meristem part of plant can grow in test tube under sterile conditions

C. it is not releated to totipotency

D. Sterilisation is not a pre-requisite

Answer: A

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29. Capacity of a plant cell to give rise to whole plant body is known as

A. Reproduction

B. Budding

C. Totipotency

D. Regeneration

Answer: C

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30. Somaclones are obtained by

A. Tissue culture

B. Plant breeding

C. Genetic engineering

D. Irradiation

Answer: A

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31. Culturing meristem of banana, sugarcane and potato is primarily significant to produce

A. Somatic hybrid

B. Virus free plants

C. Specific meristematic tissue

D. Hybrid vigour

Answer: B

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32. An explant is

A. Dead plant

B. Part of the wood

C. Part of the plant that expresses a specific gene

D. Part of the plant used in tissue culture

Answer: D

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33. Select correct statement (w.r.t somaclones)

A. Somaclones of tomato and banana have been produced on commerical scale

B. They are genetically not identical

C. They are produced by sexual reproduction

D. Can be generated in field

Answer: A

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34. Select the incorrect option (w.r.t tissue culture)

A. Genetically identical - Somaciones

B. Capacity to generate a whole plant - Totipotency

C. Plant cell without cell wall - Protoplast

D. Virus free part of plant - Flower

Answer: D

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35. Somatic hybridisation is accomplished by

A. Grafting between two varieties

B. Fusion of two protoplast of different varieties of plants

C. Chromosome doubling in androgenic culture

D. Recombinant DNA technology

Answer: B

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Assignment Section B

1. An improved variety is

A. Always superior to the other existing varieties

B. Always inferior to the other existing varieties

C. May be superior to the other existing varieties

D. More than one options are correct

Answer: A

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2. An improtant germplasm storing centre in India is

A. CDRI

B. FRI

C. ICRISAT

D. NEERI

Answer: C

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3. Germplasm can be collected from many sources, where the preferred source of develop disease resistance is

A. Improved variety

B. Wild relative

C. Local variety

D. Plantlet from culture experiment

Answer: B

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4. Emasculation is required for:

A. Pure lines

B. Selective hybridisation

C. Self pollination

D. Inbreeding

Answer: B

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5. Select the incorrect statement w.r.t plant breeding

A. In many crops pre-existing genetic variability is available from wild relatives of the crop

B. Progeny plants with superior characters are self-pollinated for several generations till they reach a state of heterozygosity

C. Hybrid breeding have led to development of several high yielding varieties resistance to water stress

D. Conventional method of breeding for disease resistance is that of hybridisation and selection

Answer: B

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6. Which of the following is an example of intergeneric hybridization ?

A. Triticale

B. Raphanobrassica

C. ADT-37

D. More than one option is correct

Answer: D

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7. Gene responsible for dwarfing in wheat is

A. dee-geo-woo-gen

B. norin-10

C. cry gene

D. nod gene

Answer: B

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8. Improved Indian variety of wheat, carrying genes of dwarfness and higher percentage of protein and lysine is

Or

Which was first Indian dwarf amber gained variety of wheat made from Sonara 64 by γ-rays (gamma rays)

A. Sonalika

B. Sharbati sonora

C. Kalyan sona

D. HUW - 468

Answer: B

9. The semi-dwarf wheat vareties brought from Mexico into india were

A. Sonalika and NP-836

B. Sharbati Sonora and PusaLerma

C. Sonara- 64 and Lerma Rojo- 64

D. Sonara-64 and HUW - 468

Answer: C

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10. Which of the following is a chemical mutagen ?

A. Ethyl methane sulphonate and X-rays

B. Sodium azide and UV rays

C. Ethyl methane sulphonate and Sodium azide

D. X-rays, gamma rays and UV rays

Answer: C

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11. Bread wheat is

A. Triticum turgidum

B. Secale cereale

C. T.aestivum

D. T.durum

Answer: C

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12. Late blight of Potato is due to

A. Fusarium udum

B. Phytophthora infestans

C. Plasmopara viticola

D. Alternaria solani

Answer: B

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13. The use of colchicines is involved in production of

A. Somaclonal variations

B. Haploids

C. Polyploids

D. Hybrids

Answer: C

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14. Large numbers of new varieties have been developed through mutation breeding and it has been used commonly in

A. Self pollinating crops

B. Cross pollinating crops

C. Allogamous plants

D. More than one option is correct

Answer: A

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15. Which one of the following is not an improved variety of flat bean ?

A. Pusa sem 2

B. Pusa sem 3

C. Pusa sawani

D. Both (1) & (2)

Answer: C

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16. Select the correct match w.r.t crop variety and resistance to insect pests

A. Crop Variety Insect Pests Brassica Pusa Swarnim Fruit borer

B. Crop Variety Insect Pest Flat bean Pusa A-4 Jassids

C. Crop Variety Insect Pests Okra Pusa Sawani Shoot and Fruit borer

D. Crop Variety Insect Pests Rapeseed mustard Pusa Sem 2 Aphids

Answer: C

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17. Maize is rich in

A. Thiamine

B. Lysine

C. Tryptophan

D. Alanine

Answer: A

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18. Anti-nutritional neurotoxic factor called cyanoalanine is found in

A. Brassica oleracea

B. Almond

C. Seeds of khesari

D. Kidney bean

Answer: C

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19. Atlas 66 variety of wheat was developed for

A. High protein content

B. Scented grains

C. Checking grassy stunt virus

D. Vitamin C

Answer: A

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20. Cereals and millets are mainly deficient in which amino acids?

A. Sulphur containing amino acid-methionine and crysteine

B. Lysine

C. Tryptophan

D. Both (2) & (3)

Answer: D

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21. SCP has to be processed to remove excess of

A. Proteins

B. Nucleic acids

C. Minerals

D. Carbohydrates

Answer: B

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22. Tissue culture using axillary bud is recommended for

A. Production of virus free plants

B. Induction of polyploidy

C. Phytoremediation

D. Gene cloning

Answer: A

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23. The optimum pH of a typical nutrient medium for plant tissue culture is

A. 2.5

B. 5.7

C. 7

D. 7.8

Answer: B

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24. An embryoid is

A. Somatic embryo developed in culture

B. A microscopic embryo

C. A monozygotic embryo formed by in vitro culture

D. Haploid

Answer: A

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25. Embryo culture is used for :

A. Establishing suspension culture

B. Recovery of interspecific hybrids

C. Somatic hybridisation

D. Haploid production

Answer: B

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26. Protoplasts of two different cells can be made to fuse with the help of

A. Polyethylene glycol (PEG)

B. Calcium chloride

C. Sodium bicarbonate

D. HCl

Answer: A

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27. A technique of androgenic haploid formation was developed by

A. Carison et. al.

B. Guha and Maheshwari

C. Skoog and Miller

D. Steward et.al.

Answer: B

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28. Cybrid is a result of

A. Fusion of cytoplasm and nuclei of the two somatic cells

B. Fusion of cytoplasm of two somatic cell but the nuclei remain unfused

C. Fusion of cytoplasm of two somatic cells occurs but the nucleus of one cell persists, and the nucleaus of other degenerates

D. Fusion of cytoplasm of two somatic cells take place but one part of the nucieus of

one cell fuses with the entire nucleus of second cell

Answer: C

29. Prerfect homozygous individuals are produced by

A. Meristem culture

B. Anther culture

C. Protoplast culture

D. Somatic hybridization

Answer: B

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30. Pomato' is an example of

A. Parasexual hybrid

B. Intraspecific hybrid

C. Sexual hybrid

D. Intravarietial hybrid

Answer: A

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31. Consider the following statements A-D with incomplete spaces :

A. Although the plant is infected with a virus , the apical and axillary ____(i)____ is free of virus.

B. Around three billion people in the world suffer from ____(ii)____, ____(iii)____ and ____(iv)____, deficiencies or hidden hunger.

C. Alternate sources of proteins for animals and human nutrition is ____(v)____ like ____(vi)____

D. Whole plants could be generated from any part of the plant called ___(vii)___ and this capacity is called ___(viii)___

A. (iii) Meristem, (iv) Vitamin, (vi) Totipotency

B. (ii) Meristem, (v) SCP, (vi) Explant

C. (i) Bud, (ii) Micronutrient, (viii) Explant

D. (v) SCP, (vii) Explant , (viii) Totipotency

Answer: D

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32. Read the following statements carefully and find out the set of correct statements

a. Suspension culture requires constant stirring at the rate of $100 - 250$ rpm.

b. Development of diseases in a plant depends on the interactions between host genotype and environment, but not on pathogen genotype

c. Black rot of crucifers and red rot of sugarcane are diseasescaused by fungi.

d. It is expected that 125 g of Methylophilus methylotrophus produces 12.5 tonnes of protein per day.

A. b,c

B. a,d

C. b,d

D. c,d

Answer: B

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33. Somaclonal variations are the ones.

A. Caused by gamma rays

B. Produced during sexual reproduction

C. Produced by chemical mutagens

D. Produced during tissue culture

Answer: D

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34. Find odd one w.r.t green manures

A. Melilotus

B. Crotalaria

C. Jatropha

D. Trifolium

Answer: C

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35. A government agency which keeps control on introduction of new variety of plants in India is

A. Indian Council for Agricultural Research

B. NSC

C. National Bureau of Plant Genetic Resources

D. ICRISAT

Answer: C

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Assignment Section C

1. A system of rotating crops with legume or grass pasture to improve soil structrue and fertility is called

A. Shifting agriculture

B. Ley farming

C. Contour farming

D. Strip farming

Answer: B

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2. A technique of micropropagation is

A. Embryo rescue

B. Somatic hybridization

C. Somatic embryogenesis

D. Protoplast fusion

Answer: C

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3. Which of the following enhances or induces fusion of protoplasts

A. IAA and gibberellins

B. Sodium chlorides and potassium chloride

C. Polyethylene glycol and sodium nitrate

D. IAA and kinetic

Answer: C

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4. To obtain virus-free healthy plants from a diseased one by tissue culture technique, which part/parts of the diseased plant will be taken?

A. Apical meristem only

B. Palisade parenchyma

C. Both apical and axillary meristems

D. Epidermis only

Answer: C

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5. An alga which can be employed as food for humna being is

A. Ulothrix

B. Chlorella

C. Spirogyra

D. Polysiphonia

Answer: B

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6. In plant breeding programme, the entire collection (of plants/seed) having all the diverse alleles for all genes in a given crop is called

A. Cross-hybridisation among the selected parents.

B. Evaulation and selection of parents

C. Germplasm collection

D. Selection of superior recombinants

Answer: C

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7. which one of the following is a case of wrong matching?

A. Micropropgation- In vitro production of plants in large numbers

B. Callus-Unorganised mass of cells produced in tissue culture

C. Somatic hybridisation - Fusion of two diverse cells

D. Vector DNA - Site for t-RNA synthesis

Answer: D

Watch Video Solution

8. Which part would be most suitable for raising virus free plants for micropropagation?

A. Meristem

B. Node

C. Bark

D. Vascular tissue

Answer: A

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9. Green revolution in India occurred during

A. 1960's

B. 1970's

C. 1980's

D. 1950's

Answer: A

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10. Consider the following four statement (1-4) and select the option which includes all the correct ones only

(1) Single cell Spirulina can produce large quantities of food rich in protein, minerals, vitamins etc

(2) Body weight-wise the microorganism Methylophilus methylotrophus may be able to produce several times more proteins then the cows pe day

(3) Common button mushrooms are a very rich source of vitamin C

(4) A rich variety has been developed which is very rich in calcium

A. Statements (c), (d)

B. Statements (a), (c) & (d)

C. Statements (b), (c) & (d)

D. Statements (a), (b)

Answer: D

Watch Video Solution

11. Mutations can be induced with

A. Gamma radiations

B. Infra Red radiations

C. IAA

D. Ethylene

Answer: A

Watch Video Solution

12. Himgiri developed by hybridisation and seldction for disease resistance against rust pathogens is a variey of

A. Wheat

B. Chilli

C. Maize

D. Sugarcane

Answer: A

13. "Jaya" and "Ratna" developed for green revolution in India are the varieties of :-

A. Bajra

B. Maize

C. Rice

D. Wheat

Answer: C

Watch Video Solution

14. A collection of plants and seeds having diverse alleles of all the genes of a crop is called :

A. Genome

B. Herbarium

C. Germplasm

D. Gene library

Answer: C

Watch Video Solution

15. Breeding of crops with high levels of minerals , vitamins and proteins is called

A. Micropropgation

B. Somatic hybridization

C. Biofortification

D. Biomagnification

Answer: C

Watch Video Solution

16. Which of the following plant species you would select for the production of bioethanol ?

A. Zea mays

B. Pongamia

C. Jatropha

D. Brassica

Answer: C

Watch Video Solution

17. Somaclones are obtained by

A. Plant breeding

B. Irradiation

C. Genetic engineering

D. Tissue culture

Answer: D

Watch Video Solution

Watch Video Solution

18. Which is linked to discovery of Bordeaux mixture as fungicide ?

A. Black rust of wheat

B. Bacterial leaf blight of rice

C. Downy mildew of grapes

D. Loose smut of wheat

Answer: C

Watch Video Solution

19. Consider the following four measures (1-4) that could be taken to successfully grow chickpea in an area where bacterial blight disease is common:

(i) Spray with Bordeaux mixture

(ii) Control of the insect vector of the disease pathogen

(iii) Use of only disease-free seeds

(iv) Use of varieties resistant to the disease

A. (a) and (d)

B. (b) and (c)

C. (a) and (b)

D. (c) and (d)

Answer: D

Watch Video Solution

20. Which two of the above measures can control the disease ?

A. Aegilops

B. Jatropha

C. Azadirachtin

D. Musa

Answer: B

21. In maize, hybrid vigour is exploited by:

A. Inducing mutations

B. Bombarding the seedsn with DNA

C. Crossing of two inbred

D. Harvesting seeds from the most productive plants

Answer: C

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22. Crop plants grown in monoculture are

A. Low in yield

B. Free from intraspecific competition

C. Characterised by poor root system

D. Highly prone to pests

Answer: D

Watch Video Solution

Watch Video Solution

23. In maize, hybrid vigour is exploited by:

A. Bombarding the protoplast with DNA

B. Crossing of two inbreed parental lines

C. Harvesting seeds from the most productivity plants

D. Inducing mutations

Answer: B

Watch Video Solution

24. Triticale, the first man-made cereal, crop has been obtained by crossing wheat with

A. Rye

B. Pearl millet

C. Sugarcane

D. Barley

Answer: A

Watch Video Solution

25. In order to obtain virus-free plants through tissue culture the best method is :-

A. Protoplast culture

B. Embryo rescue

C. Anther culture

D. Meristem culture

Answer: D

Watch Video Solution

26. Three crops that contribute maximum to global food production are

A. Wheat, rice and maize

B. Wheat, maize and sorghum

C. Rice, maize and sorghyum

D. Wheat, rice and barley

Answer: A

Watch Video Solution

27. Norman borlaug is associated with

A. Green revolution

B. Yellow revolution

C. White revolution

D. Blue revolution

Answer: A

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28. An important step in the manufacture of pulp in paper industry from woody tissues of plants is

A. Preparation of pure cellulose by removing lignin

B. Removal of oils present in the wood by treatment with suitable chemicals

C. Removal of water from the wood by prolonged heating at approximately $50^{\circ} C$

D. Treatment of wood with chemical that breakdown cellulose

Answer: A

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29. Which of the following is generally used for induced mutagenesis in crop plants

A. Alpha particles

B. X-rays

C. UV (260 nm)

D. Gamma rays (from cobalt 60)

Answer: D

Watch Video Solution

30. Which statement is correct about center of origin of plants?

A. More diversity in improved variety

B. Frequency of dominant gene is more

C. Climatic conditions are more favourable

D. None of these

Answer: B

Watch Video Solution

31. When two unrelated individuals or lines are crossed, the performance of F_1 hybrids is often superior to both its parents. The phenomenon is called

A. Metamorphosis

B. Heterosis

C. Transformation

D. Spheing

Answer: B

Watch Video Solution

32. Which of the following is the New World spice, that has become an essential part of Indian culsine ?

A. Red pepper

B. Black pepper

C. Ginger

D. Cardamom

Answer: A

Watch Video Solution

33. The reason for vegetatively reproducing crop plants for maintaining hybrid vigour is that

A. They are more resistant dto diseases

B. Once a desired hybird produced, no chances of losing it

C. They can be easily propagated

D. They have a longer life span

Answer: B

 Watch Video Solution

34. The new varieties of plants are produced by

A. Introduction and mutation

B. Selection and introduction

C. Selection and hybridization

D. Mutation and selection

Answer: C

Watch Video Solution

35. Before the European invaders which vegetable was/were absent in india?

A. Potato and tomato

B. Simla mirch and brinjal

C. Maize and chichinda

D. Bitter gourd

Answer: A

Watch Video Solution

36. which of the following crops have been brought to india from new world?

A. Cashewnut, potato, rubber

B. Mango, tea

C. Tea, rubber, mango

D. Coffee

Answer: A

Watch Video Solution

37. A germplasm collection is a

A. Collection of specimens of all the species of an area in a herbarium or botanical garden

B. Collection of modern varienties of a crop

C. Collection of plants or seeds having diverse alleles of all genes in a crop

D. Collection of seeds or pollen of rare and threatened species of a group or area

Answer: C

Watch Video Solution

38. Bacterial leaf blight of Rice is caused by

A. Erwinia

B. Xanthomonas

C. Pseudomonas

D. Alternaria

Answer: B

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39. Introduction of food plants developed by genetic engineering is not desirable because

A. Economy of developing countries may suffer

B. These products are less tasty as compared to the already existing products

C. This method is costly

D. There is threat of entry of viruses and toxins with introduced crop

Answer: D

 Watch Video Solution

40. Which of the following plants are used as green manure in crop fields and in sandy soils

A. Crotalaria joncea and Alhagi camelorum

B. Calotropis procera and Phyllanthus niruri

C. Saccharum munja and Lantana camara

D. Dichanthium annulatum and Azolla nilotica

Answer: A

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41. Nicotiana sylvestris flowers only during long days and N.tobacum flower only during long days in the labortory undre different photoperiods , they can be induced to flower at the same time and can be cross fertized to flower aat the and can be corss fertillzed to produce self - fertile offsping .What is the best reason for considering N. syvestris and N . tobacum to be separate species

A. They cannot interbreed in nature

B. They are reproductively distinct

C. They are physiologically distinct

D. They are morphologically distinct

Answer: A

42. Which of the following statement is not true about somatic embryogenesis

A. A somatic embryo develops from a somatic cell

B. The pattern of development of a somatic embryo is comparable to that of a zygotic

embryo

C. Somatic embryo can develop from microspores

D. Somatic embryo is induced usually by an auxin such as 2, 4-D

Answer: C

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43. Tissue culture technique can produce infinite number of new plants from a small parental

tissue.The economic importance of the technique is in raising

A. Variants through picking up somaclonal variations

B. Genetically uniform population identical to the original parent

C. Homozygous diploid plants

D. Development of new species

Answer: B

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44. Cellular totipotency is demonstrated by

A. Only gymnosperm cells

B. All plants cells

C. All eukaryotic cells

D. Only bacterial cells

Answer: B

Watch Video Solution

45. In tissue culture medium, the embryoids formed from pollen grains is due to

A. Cellular totipotency

B. Organogenesis

C. Double fertilization

D. Test Tube culture

Answer: A

Watch Video Solution

46. The technique of obtaining large number plantlets by tissue culture method is called

A. Plantlet culture

B. Organ culture

C. Micropropagation

D. Macropropagation

Answer: C

Watch Video Solution

47. A plant hormone used for inducing morphogensis in plant tissue culture is

A. Cytokinins

B. Ethylene

C. Abscisic acid

D. Gibberellins

Answer: A

Watch Video Solution

Assignment Section D

1. A : Somatic hybrids may be used for the production of useful plants.

R : Genetic manipulation can be carried out more rapidly when plant cells are in protoplast state.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: A

Watch Video Solution

2. A : Callus is obtained within 2-3 weeks.

R : Suspension culture grows much faster than callus culture.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: B

Watch Video Solution

3. A : Genetic improvement of the crop is plant breeding.

R : It creates desired plant types that are better suited for cultivation.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: A

Watch Video Solution

4. A : The phase between 1960-1970 is often called the Green Revolution.

R : The development of several high yielding varieties of wheat and rice in 1960s increased yields per unit area.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: A

Watch Video Solution

5. A : The maize having high nitrogen, sugar and aspartic acid is resistant to pest.

R : It develops resistance to maize root borers.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: D

Watch Video Solution

6. A : Shakti and Rattan are Lysine rich varieties of maize.

R : Wheat variety Atlas-66 has high protein content.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: B

7. A : New cultivar before release is tested for at least growing seasons.

R : Testing is performed at only one agroclimatic zone is different seasons.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: C

Watch Video Solution

8. A : Pomato. A somatic hybrid is not popular among common people.

R : This plant did not have all the desired

combination of characteristics for its commericial utilization.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: A

9. A : Source of SCP can be prokaryotic as well as eukaryotic organism.

R : SCP is obtained from unicellular organisms as well as multicellular organisms.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: B

10. A : Hybrid is an individual resulting from a cross between two genetically unlike parents.

R : Hybrid vigour is the superiority of hybrid over either of the parents.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both Assertion & Reason are true and the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true statement but Reason is false, then mark (3).

D. If both Assertion and Reason are false statements, then mark (4)

Answer: B

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Assignment Section A

1. Animal husbandry deals with

A. Only caring of livestock

B. Only breeding of livestock

C. Both caring and breeding of livestock

D. Slaughtering of livestock

Answer: C

Watch Video Solution

2. Which of the following animal is not included in livestock?

A. Pig

B. Buffalo

C. Goat

D. Rhinoceros

Answer: D

Watch Video Solution

3. World livestock population present in india and china is about

A. 0.25

B. 0.7

C. 0.4

D. 0.5

Answer: B

Watch Video Solution

4. Contribution to the world farm produce by india and china is

A. 0.05

B. 0.1

C. 0.15

D. 0.25

Answer: D

Watch Video Solution

5. All the following are objectives of dairy farm management, except

A. Improvement in quality of milk

B. Selection of good breeds having high yielding potential

C. Selection of breeds which are vulnerable to diseases

D. Maintenance of quality and quantity of fodder

Answer: C

Watch Video Solution

6. A good breed of cattle means

A. It should have high yielding potential

B. It should have resistance to diseases

C. It should consume less amount of water

D. Both (1) & (2)

Answer: D

Watch Video Solution

7. The management of animals for milk and its products for human consumption is called

A. Poultry

B. Dairying

C. Apiculture

D. Fisheries

Answer: B

 Watch Video Solution

8. Which of the following measure is taken to realise the yield potential of cattle?

A. Proper housing

B. Adequate supply of water and fodder

C. Stringent cleanliness and hygiene

D. All of these

Answer: D

Watch Video Solution

9. In dairy farm management, we deal with processes and systems that increase yield and improve quality of milk. Which of the following statement is incorrect in this regard?

A. Milk yield is primarily dependent on the quality of milk, therefore selection of high yielding breed is very important

B. The quality and quantity of fodder provided to cattle do not contribute much to the milk yield

C. Cleanliness and hygiene both of the cattle and handlers are of paramount importance while milking, storage and transport of the milk and its products

D. Regular inspections, visits by a veterinary and rectify the problems as early as possible thus ensuring a proper milk yield

Answer: B

10. Which of the following birds are included in poultry?

A. Chicken and ducks only

B. Chicken,ducks, turkey

C. Chicken only

D. Chicken, ducks, turkey, geese

Answer: D

Watch Video Solution

11. The changes contracting bird flu from a properly cooked (above $100^{\circ} C$) chicken and egg are

A. Very high

B. High

C. Moderate

D. None of these

Answer: D

Watch Video Solution

12. Which of the following can drastically affect the egg and chicken consumption in a country?

A. Bird flu

B. Inbreeding

C. Out-crossing

D. Cross-breeding

Answer: A

Watch Video Solution

13. Controlled mating followed by selection in order to obtain superior genotypes of domesticated animals is known as

A. Animal Breeding

B. Weeding

C. Feeding

D. Heeding

Answer: A

Watch Video Solution

14. A group of animals which are related by descent and share many similarities are referred to as

A. Breed

B. Variaty

C. Race

D. Species

Answer: A

Watch Video Solution

15. One of the following is an exotic breed of cattle

A. Jersey

B. Leghorn

C. Hisardale

D. None of the above is a breed of cattle

Answer: A

16. Inbreeding is carried out in animal husbandry because it

A. Increases vigour

B. Improves the breed

C. Increases heterozygosity

D. Increases homozygosity

Answer: D

Watch Video Solution

17. Which of the following is necessary to evolve a pureline in any animal?

A. interspecific hybridization

B. Out-crossing

C. Cross-breeding

D. In-breeding

Answer: D

Watch Video Solution

18. Mule is an example of___

A. Interspecific hybridization

B. outbreeding

C. Out-crossing, obtained by crossing male donkey and female horse

D. Cross breeding, obtained by crossing female donkey and male horse

Answer: A

Watch Video Solution

19. Hisardale, a new breed of sheep is produced through

A. Out-crossing

B. In-breeding

C. Cross-breeding

D. Interspecific hybridization

Answer: C

Watch Video Solution

20. Artificial insemination is advantageous because

A. It is economical and successs rate of fertilization is high

B. Several cows can be fertilised by the semen collected from one bull

C. The semen can be stored frozen for a long period and can be easily transported to remote parts of the country

D. All of these

Answer: D

Watch Video Solution

21. The process in which semen is which semen is collected from the male that is chosen as a parent and injected into the reproductive trat of the selected female by the breeder is known as

A. Animal Breeding

B. Artificial insemination

C. MOET

D. Artificial spermatogenesis

Answer: B

Watch Video Solution

22. Following are the steps in MOET programme for herd improvement in which a cow has been administered hormones with FSH like activity. Arrange steps A to D in their correct sequence in MOET

A. Transferred to surrogate mothers

B. It produces 6-8 eggs instead of one egg which

they normally yield per cycle

C. It is artificially inseminated or mated with an elite bull

D. Fertilised eggs at 32 celled stage are recovered non-surgically

A. B, A, C, D

B. C, A, B, D

C. B, C, A, D

D. B, C, D, A

Answer: D

Watch Video Solution

23. Which one of the following products of apiculture is used is cosmetics and polishes?

A. Honey

B. Oil

C. Royal jelly

D. Beeswax

Answer: D

Watch Video Solution

24. The term pisciculture means

A. Inland fisheries

B. Aquatic plants

C. Marine fisheries

D. Both (1) & (3)

Answer: D

Watch Video Solution

25. Blue revolution is enhancement in production of

A. Milk

B. Egg

C. Fish

D. Wheat

Answer: C

Watch Video Solution

Assignment Section B

1. The spread of bird flu can be prevented by

A. Culling

B. Breeding

C. Separation of infected birds from the flock of undiseased ones

D. Both (1) & (3)

Answer: D

Watch Video Solution

2. Feeding constitues the major management concern in poultry. It is required for high

A. Egg production only

B. Meat production only

C. Both egg and meat production

D. Feeding of birds in poultry is not of prime importance

Answer: C

Watch Video Solution

3. Which of the following is not an objective of animal breeding?

A. Increasing yield of milk, eggs, meat, wool etc

B. Improving the desirable qualities of produce

C. Slow growth rate

D. Resistance to various diseases

Answer: C

Watch Video Solution

4. An out-cross is produced when animals

A. Within the same breed having common ancestors are mated

B. Within the same breed having no common ancestors on either side of their pedigree upto 4-6 generations are mated

C. Of different breeds are mated

D. Of different species are mated

Answer: B

Watch Video Solution

5. Which of the following is practised to overcome for average productivity in animals w.r.t. milk

production, growth rate in beef cattle etc?

A. Out-crossing

B. Cross-breeding

C. Interspecific hybridisation

D. Inbreeding

Answer: A

Watch Video Solution

6. Hisardale is a new breed of sheep developed in Punjab by crossing

A. Bikaneri ewes and Merino rams

B. Merino ewes and Bikaneri rams

C. Bikaneri ewes and Bikaneri rams

D. Merino ewes and Merino rams

Answer: A

Watch Video Solution

7. Which of the following statement is incorrect w.r.t. inbreeding?

A. Inbreeding increases homozygosity

B. Inbreeding exposes harmful recessive genes that are eliminated by selection

C. Inbreeding helps in accumulation of deleterious alleles and elimination of desirable alleles

D. Inbreeding helps in developing a pure-line in animal

Answer: C

8. Artificial breeding of cattle is brought about by

A. Artificial insemination

B. Superovulation and embryo transplanation

C. Interspecific hybridisation

D. Both (1) & (2)

Answer: D

Watch Video Solution

9. The hormone injected to cow to induce follicular maturation and superovulation is having _____ like activity

A. Estrogen

B. Progesterone

C. Testosterone

D. FSH

Answer: D

Watch Video Solution

10. MOET has not been practiced in

a. Cattle b. Sheep

c. Rabbits d. Poultry

A. b, c & d

B. b & d

C. d only

D. c only

Answer: C

Watch Video Solution

11. Rearing of bees is

A. Horticulture

B. Apiary

C. Apiculture

D. Poultry

Answer: C

Watch Video Solution

12. The most common species of honeybee reared commercially in artificial hives in India is

A. Apis indica

B. Apis florea

C. Apis mellifera

D. Apis dorsata

Answer: C

Watch Video Solution

13. Which of the following are edible marine fishes?

A. Hilsa, Catla, Sardines

B. Sardines, Mackerel, Rohu

C. Hilsa, Sardines, Mackerel

D. Mackerel, Pomfrets, Common carp

Answer: C

 Watch Video Solution

14. Aquaculture does not include

A. Useful aquatic plants

B. Fish

C. Prawn

D. Silkworms

Answer: D

Watch Video Solution

15. To increases lactation/milk yield, cow is given

A. Stilbestrol

B. Sorbitol

C. Gonadotropin

D. Prolactin

Answer: A

Watch Video Solution

16. Pure line breed refers to

A. Heterozygosity only

B. Heterozygosity and linkage

C. Homozygosity only

D. Homozygosity and self assortment

Answer: C

Watch Video Solution

17. Pebrine disease of silkworms is caused by

A. Dugesia

B. Monocystis

C. Nosema

D. plasmodium

Answer: C

Watch Video Solution

18. Which of the following disease is caused by a protozoan Eimeria in fowls resulting in bloody diarrhoea?

A. Fowl cholera

B. Coccidiosis

C. Thrush

D. Ranikhet

Answer: B

Watch Video Solution

19. A cow which give more milk per lactation is evolve into pure line by mating with superior bull of same breed for 4-6 generation. Which type of breeding is being referred to in this case?

A. Inbreeding

B. Outbreeding

C. Cross breeding

D. Out crossing

Answer: A

Watch Video Solution

20. Which of the following is correct to check the inbreeding depression?

A. Artificial hybridisation

B. Cross breeding

C. Selecting animal should be mated with unrelated superior animals of the same

breed

D. Selected animal should be mated with unrelated superior animals of the different breed

Answer: C

Watch Video Solution

21. Ranikhet is a disease of

A. Poultry

B. Fishery

C. Apiculture

D. Cattles

Answer: A

Watch Video Solution

22. Shahtoosh is obtained from

A. Lohi

B. Patanwadi

C. Chiru

D. Marwari

Answer: C

Watch Video Solution

23. Match the following

	Column-I		Column-II
$a.$	Kashmiri goats	(i)	Superior carpet wool
$b.$	Tibetian antelope	(ii)	Pashmina
$c.$	Rabbit	(iii)	Shahtoosh
$d.$	Sheep (Nail)	(iv)	Angoora

A. a(ii), b(iv), c(iii), d(i)

B. a(ii), b(iii), c(iv), d(i)

C. a(iii), b(ii), c(iv), d(i)

D. a(iii), b(iv), c(ii), d(i)

Answer: B

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24. If a cattle is showing increased resopiration and blood mixed foamy discharge from mouth, nose and anus, it is likely to be suffering from

A. Rinderpest

B. Mad cow disease

C. Ranikhet

D. Anthrax

Answer: D

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25. A queen Honey Bee lays eggs of :

A. One type from which all castes develop

B. Two types, one forming queen and workers and second type forming drones

C. Three types forming queen, drone and workers

D. Unfertilized-eggs die while fertilized ones form all castes

Answer: B

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Assignment Section C

1. Homozygous purelines in cattle can be obtained by

A. mating of related individuals of same breed

B. mating of unrelated individuals of same breed

C. mating of individuals of different breed

D. mating of individuals of different species

Answer: A

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2. Which of the following diseases is caused by a protozoan

A. Blastomycosis

B. Syphilis

C. Influenza

D. Babesiosis

Answer: D

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3. Outbreeding is an important strategy of animal husbandry because it

A. Exposes harmful recessive genes that are eliminated by selection

B. Helps in accumulation of superior genes

C. Is useful in producing purelines of animals

D. Is useful in overcoming inbreeding depression

Answer: D

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4. Which one of the following is a viral disease of poultry?

A. Pasteurellosis

B. Salmonellosis

C. Coryza

D. New Castle disease

Answer: D

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5. In cloning of cattle a fertilised egg is taken out of the mother's womb and

A. From this upto eight identical twins can be produced

B. The egg is divided into four pairs of cells which are implanted into the womb of others cows

C. In the eight cell stage, cells are separated and cultured until small embryos are formed which are implanted into the womb of other cows

D. In the eight cell stage the individual cells are separated under electrical field for further development in culture media

Answer: C

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6. The causative agent of mad-cow diesase is a

A. Bacterium

B. Prion

C. Worm

D. Virus

Answer: B

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7. The world's highly prized wool yeilding 'Pashmina' breed is :

A. Sheep

B. Goat

C. Goat-sheep cross

D. Kashmir sheep-Afghan sheep cross

Answer: B

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8. The term 'aquaculture' means

A. Inland fisheries

B. Culture fishery only

C. Marine fisheries

D. Both (1) & (3)

Answer: D

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9. Mating of more closely related individuals within the same breed for 4-6 generation is called:-

A. Outbreeding

B. Interspecific breeding

C. Inbreeding

D. Cross breeding

Answer: C

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10. Inland fisheries involve

A. Culturing fish in ponds

B. Culturing ondogenous breed of fish in deep sea and coastal areas

C. Culturing exotic breed of fish in estuaries

D. Culturing any breed of fish in marine water

Answer: A

11. Inbreeding depression occurs due to

A. Continued out crossing within the small local population

B. Continued cross breeding within the small local population

C. Continued inbreeding within the small local population

D. Interspecific hybridization

Answer: C

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12. Fishery is an industry devoted

A. To the catching of fishes

B. To the catching and processing of fishes and shell fishes

C. To the catching, processing and selling of fishes, shell fishes, crabs, prawns etc.

D. All of these

Answer: D

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13. Which of the following types of bees intimate source of food to other workers by dancing movements?

A. Drones

B. Scout bees

C. Nurse bees

D. Queen bees

Answer: B

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14. Which one is wrongly matched?

A. Apiculture - Honey bee only

B. Aquaculture - Fish only

C. Sericulture - Silk moth only

D. Poultry - Ducks

Answer: B

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15. Three carp fishes, Catla, Labeo and Cirrhina, can be grown together in the same pond more economically as they have :

A. Positive interactions

B. Commensalism

C. Symbiosis

D. No competition for food

Answer: D

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16. Out-crossing, cross-breeding and interspecific hybridization are included in

A. Inbreeding

B. Out-breeding

C. Inbreeding depression

D. Farm management

Answer: B

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17. In polyculture two or more than two species of fishes are grown together in the same water body based on their

A. Size

B. Feeding habits

C. Reproductive habit

D. Mode of respiration

Answer: B

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18. Which of the following animal diseases is caused by a virus?

A. Anthrax

B. Rinderpest

C. Tick fever

D. Coccidiosis

Answer: B

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19. Mark the viral disease in cattle

A. Cattle plague

B. Anthrax

C. Foot and mouth disease

D. Both (1) & (3)

Answer: D

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20. White revolution is associated with enhancement of

A. Fish production

B. Egg production

C. Milk production

D. Wheat and ice production

Answer: C

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21. Brooders pneumonia disease is connected with

A. Honey bee

B. Hens

C. Fish

D. Pigs

Answer: B

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22. Shahtoosh, the king of wools is obtained from

A. Chiru

B. Kashmiri goat

C. Merino sheep

D. Rabbit

Answer: A

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23. Tassar silk is obtained from

A. Antherea roylei

B. Bombyx mori

C. Apis indica

D. Apis dorsata

Answer: A

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24. Name one disease of mulberry silk worm caused by Protozoa an(Nosema bombycis)

A. Muscardine

B. Pebrine

C. Maggot disease

D. Flacherie

Answer: B

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25. Which among the following is real product of Honey Bee ?

A. Honey

B. Propolis

C. Pollen

D. Bee wax

Answer: D

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26. High milk yielding varieties of cows are obtained by :

A. Use of surrogate mothers

B. Super ovulation

C. Artificial insemination

D. All of these

Answer: D

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27. Choose the species of honey bee that is most commonly found in Indian subcontinent

A. Apis mellifera

B. Apis dorsata

C. Apis florea

D. Apis indica

Answer: D

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28. Entomophily through bees has resulted in enhanced production of crops, except

A. Sunflower

B. Strawberry

C. Pears

D. Banana

Answer: D

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Assignment Section D

1. A : Bulls not selected for breeding are castrated when young and converted to bullocks

R : They are the main source of animal drought power in India

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2. A : Anthrax is caused by a bacterium

R : Anthrax develops only in buffaloes and can't be transferred to human

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3. A : In anthrax, the animal dies due to lack of oxygen

R : The anthrax bacterium uses up the oxygen carried by the animal blood

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4. A : Goat is called 'poor man's cow'

R : It yields only a small quantity of milk

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5. A : Multivoltine silkworms give upto eight crops per year

R : Their cocoons contain a small amount of silk

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6. A : The Arabian camel is the only kind found in India

R : The size of the hump is good indicator of its nourishment

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7. A : Sericin is a gummy substance which is usually retained in case of silk till the yarn or fabric stage

R : Sericin gives protection during processing

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8. A : Poultry farming has definite advantage over live-stock rearing

R : Poultry birds are easy to raise, can be acclimatised to a wide range of climatic conditions, have short life span and are prolific breeders

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9. A : Encephalomalacia, disease of poultry is caused by the protozoan Eimeria

R : Encephalomalacia, causes bloody diarrhoea in poultry

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10. Assertion : Fish meal is a rich source of protein for cattle and poultry.

Reason : Fish meal is produced from non-edible parts of fishes like fins, tail etc.

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