

Studentpad

NEET BOTANY FULL PORTION PAPER 2022-23

Time : 150 Min

Bot : Full Portion Paper

Marks : 200

01) The endoskeleton of cell is made up of

- A) Cell wall
- B) Cytoplasm
- C) Mitochondria
- D) Endoplasmic reticulum

02) Dendrochronology is the study of

- A) Diameter of a tree
- B) Height of a tree
- C) Age of a tree by counting the number of annual rings in the main stem
- D) None of these

03) Secondary pollutant which stops Hill reaction is

- A) Nitric acid
- B) Sulphuric acid
- C) Aldehydes
- D) Peroxyacetyl nitrate (PAN)

04) In a plant species, flower colour yellow is dominant over white, and fruit shape round is dominant over elongated. Crossing was performed between two purelines-one having yellow-flower and round-fruit, and another with white-flower and elongated-fruit. About 20 plants survived in F_1 progeny. Plants of F_1 were allowed to self-fertilize, and about 960 plants survived in F_2 .

If the traits follow Mendelian inheritance, what are the number of plants would have yellow-flower and round -fruit in F_1 and F_2 ?

- A) 10, 60
- B) 10, 180
- C) 20, 540
- D) 20, 960

05) _____ is the subaerial stem modification with long internode.

- A) Offset
- B) Rhizome
- C) Runner
- D) Sucker

06) Ginger plant has an underground stem which is

- A) Rhizome
- B) Bulb
- C) Corm
- D) Tuber

07) In 1900 A.D. three biologists independently discovered Mendel's principles. They are

- A) Bateson, Punnet and Bridges
- B) Avery, McLeod and McCarthy
- C) Sutton, Morgan and Bridges
- D) De Vries, Correns and Tschermak

08) Oxygen evolution is connected with which of the following part?

- A) Photosystem II
- B) Photosystem I
- C) RUBP enzyme
- D) Cyclic photophosphorylation

09) Study of environment and animals relation

- A) Phytosociology
- B) Ecosystem
- C) Biotic community
- D) Ecology

10) The plant undergoes wilting when

- A) Xylem is blocked
- B) Cambium is blocked
- C) Some roots are reduced in number
- D) Phloem is blocked

11) Linked gene are separated by

- A) Mutation
- B) Crossing over
- C) Both (1) and (2)
- D) None of these

12) With which of the following process Cholodny-Went theory is concerned?

- A) Phototropism
- B) Photomorphogenesis
- C) Photoperiodism
- D) Photorespiration

13) In _____ cycles, O_2 is directly used.

- A) Oxidative decarboxylation
- B) Fermentation
- C) Electron transport chain
- D) Glycolysis

14) _____ elements in plants is not remobilised.

- A) Phosphorus
- B) Sulphur
- C) Calcium
- D) Both (b) and (c)

15) Escherichia coli with completely radioactive DNA was allowed to replicate in non-radioactive medium for two generations. What is the percentage of bacteria with radioactive DNA?

- A) 12.5%
- B) 25%
- C) 50%
- D) 100%

16) In oogamy, fertilization involves

- A) A large non-motile female gamete and a small

motile male gamete

B) A small non-motile female gamete and a large motile male gamete

C) A large motile female gamete and a small non-motile male gamete

D) A large non-motile female gamete and a small non-motile male gamete

17) A bacterial cell undergoes binary fission every twenty minutes. Starting with a single bacterium how many bacteria will be produced at the end of 3 hours

A) 1022

B) 512

C) 256

D) 128

18) The germ pores on the pollen grains are found on the

A) Intine only

B) Exine only

C) Vegetative cell

D) Both exine and intine

19) Ladybird bug is a predator of

A) Aphids

B) Beetles

C) Moths

D) Bacteria

20) Mark the correct statement.

A) *Saccharomyces cerevisiae* is used as clot buster.

B) *Acetobacter aceti* produces citric acid.

C) *Penicillium notatum* restrict the growth of *Staphylococci*.

D) *Methanogens* are found in aerobic conditions.

21) Statement 1 : Mitochondria is known as power house of cell.

Statement 2 : ATP production takes place here.

A) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1

B) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1

C) The statement 1 is true but the statement 2 is false

D) Both the statement 1 and statement 2 are false

22) In which of the following groups would you place a plant which produces seeds but lacks flower and fruits?

A) Pteridophytes

B) Fungi

C) Bryophytes

D) Gymnosperms

23) Anchorage organs of *Funaria* are

A) Multicellular rhizoids

B) True roots

C) Adventitious roots

D) Unicellular rhizoids

24) Match the following.

	Column I		Column II
A.	Family	(i)	Diptera
B.	Order	(ii)	Arthropoda
C.	Class	(iii)	Muscidae
D.	Phylum	(iv)	Insecta

A) A-(iii), B-(i), C-(iv), D-(ii)

B) A-(iii), B-(ii), C-(iv), D-(i)

C) A-(iv), B-(ii), C-(i), D-(iii)

D) A-(iv), B-(iii), C-(ii), D-(i)

25) An ecologist uses the term biodiversity for the variety of which of the following species?

A) All living animals

B) All living plants

C) Both (a) and (b)

D) (a), (b) and microbes also living in their natural habitats

26) Stilt roots which grow obliquely from basal nodes of culm stem and acting as brace are found in

A) Maize

B) Sorghum

C) Sugarcane

D) All of these

27) Which organization publishes the Red list of species?

A) ICFRE

B) IUCN

C) WWF

D) UNEP

28) Read the following four statements (A-D).

(a) Colostrum is recommended for the new born because it is rich in antigens

(b) Chikungunya is caused by a Gram negative bacterium

(c) Tissue culture has proved useful in obtaining virus-free plants

(d) Beer is manufactured by distillations of fermented grape juice.

What is the count of wrong statements?

A) Two

B) Three

C) One

D) Four

29) Meristems are found in

A) *Cycas* stem

B) Fern leaf

C) Fern rhizome

D) Pollens of *Pinus*

30) Mark the incorrect statement.

A) A museum has collection of photographs of plants and animals.

B) Key is a taxonomic aid for identification of specimens.

C) Botanical gardens have collection of living plants for reference.

D) Herbarium houses dried, pressed and preserved

plant specimens.

31) In the overall process of photosynthesis, what is the total number of CO_2 , water, sugar and O_2 molecules utilized and produced?

- A) 31
- B) 19
- C) 13
- D) 12

32) Statement 1 : Fruticose lichens have the simplest thallus.

Statement 2 : The thallus is attached only at the base by a flattened disc.

- A) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1
- B) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
- C) The statement 1 is false but statement 2 is true
- D) The statement 1 is true but the statement 2 is false

33) Plant cells submerged in distilled water will become

- A) Turgid
- B) Flaccid
- C) Impermeable
- D) Plasmolysed

34) Which of the following conversion is carried out by nitrogenase enzyme?

- A) Atmospheric nitrogen into ammonia
- B) Ammonia into nitrate and nitrite
- C) Nitrate and nitrite into nitrogen
- D) Nitrate into nitrate

35) Through their effects on plant growth regulators, _____ affect by the temperature and light in the plants.

- A) apical dominance
- B) flowering
- C) closure of stomata
- D) fruit elongation

36) Nucleic acids in chromosomes in bacteria are

- A) Linear RNA
- B) Circular DNA
- C) Linear DNA
- D) Two types of DNA and RNA

37) Transcription of DNA is aided by

- A) DNA polymerase
- B) RNA polymerase
- C) Exonuclease
- D) Recombinase

38) The Air (Prevention and Control of Pollution) Act was amended in 1987 to include _____ as pollutant.

- A) dust
- B) noise
- C) water

D) none of these

39) The presence of _____ make the long plants capable for standing erect.

- A) sclerenchyma
- B) collenchyma
- C) prosenchyma.
- D) parenchyma

40) Cell division cannot be stopped in _____ phase of the cycle.

- A) Prophase
- B) G_2 -phase
- C) S-phase
- D) G_1 -phase

41) Find out the incorrect statements from the following.

- a. Asexual reproduction is common among single-celled organisms, and in plants and animals with relatively complex organisations.
- b. In yeast, the division is unequal and small buds are produced that remain attached initially to the parent cell which eventually gets separated and mature into new yeast organism (cells).
- c. Vegetative reproduction is also a type of asexual reproduction.
- d. While in animals and other simple organisms the term vegetative reproduction is used unambiguously, in plants, the term asexual reproduction is frequently used.
- e. Water hyacinth is also called 'Terror of Bengal.'
- A) a and e
- B) b and d
- C) a and d
- D) b and c

42) In a type of apomixis known as adventive embryony, embryos develop directly from the

- A) Zygote
- B) Nucellus or integuments
- C) Accessory embryo sacs in the ovule
- D) Synergids or antipodals in a embryo sac

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

- A) apical meristem only
- B) palisade parenchyma
- C) epidermis only
- D) both apical and axillary meristems

44) Pneumatophore roots are present in

- A) Xerophytes
- B) Mesophytes
- C) Hydrophytes
- D) Halophytes

45) Statement 1 : Funaria is monoecious.

Statement 2 : Cross fertilization occurs in Funaria.

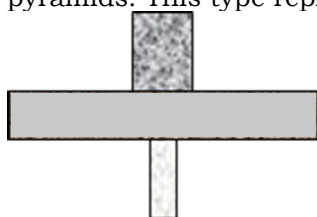
- A) Both the statement 1 and statement 2 are true but the statement 2 is not a correct explanation of the statement 1

- B) Both the statement 1 and the statement 2 are true and the statement 2 is a correct explanation of the statement 1
 C) The statement 1 is true but the statement 2 is false
 D) Both the statement 1 and statement 2 are false

46) Which of the following step involvd in double fertilization?

- A) Fertilization of two eggs in the same embryo sac by two sperms brought by one pollen tube
 B) Fertilization of the egg by two male gametes
 C) Fertilisation of the egg and the central cell by two sperms brought by different pollen tubes
 D) Fertilisation of the egg and the central cell by two sperms brought by the same pollen tube

47) Given below is one of the types of ecological pyramids. This type represents



- A) Pyramid of numbers in a grassland
 B) Energy pyramid in a spring
 C) Pyramid of biomass in a lake
 D) Pyramid of biomass in a fallow land

48) Jacob and Monad studied lactose metabolism in *E. coli* and proposed operon concept, which is applicable for

- A) Eukaryotes
 B) Prokaryotes
 C) Protozoanes
 D) All of these

49) Phytotron is a device by which

- A) Protons are liberated
 B) Plants are grown in controlled environment
 C) Mutations are produced in plants
 D) Leaf fall occurs on abscission layer

50) In Kreb's cycle the hydrogen atoms removed at succinate level are accepted by

- A) FAD
 B) ADP
 C) NAD
 D) ATP