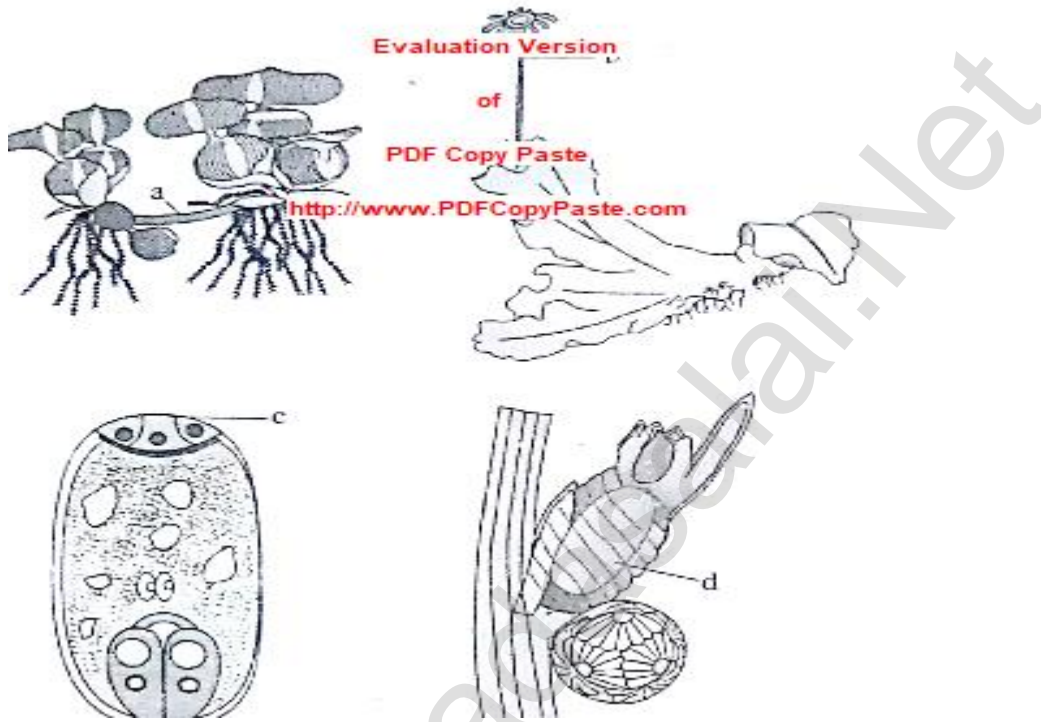


SECTION C: PREVIOUS YEARS' EXAMINATION QUESTIONS

1. Examine the figures (a--d) given below and select the right option in which all the four structures are identified correctly. (2010)



- a) a—Rhizome, b—Sporangiophore, c—Polar cell, d—Globule
 b) a—Runner, b—Archegoniophore, c—synergid, d—Antheridium
 c) a—Offset, b—Anthridiophore, c—Antipodals, d—Oegonium
 d) a—Sucker, b—Seta, c—Megaspore mother cell, d—Gemma cup
2. Roots are used in vegetative propagation of
- a) **Ginger** b) Chrysanthemum c) Sweet potato d) Potato
3. Vegetative propagation in Pistai occurs by
- a) Sucker b) Runner c) **Offset** d) Stolon
4. Which is wrongly matched?
- a) Agave – bulbils

- b) Penicillium – conidia
- c) Water hyacinth – runner
- d) Bryophyllum – leaf buds

5. Human gametes differ from all other body cells in being (2013)

- a) Haploid
- b) diploid
- c) motile
- d) without cell wall

6. Match the following and choose the correct combination (2013)

Name	Chromosome number in Meocyte (2n)
a) Housefly	1) 20
b) Fruitfly	2) 34
c) Apple	3) 8
d) Maize	4) 12

- a) a—1, b—2, c—3, d—4
- b) a—2, b—3, c—4, d—1
- c) a—3, b—4, c—2, d—1
- d) a—4, b—3, c—1, d—2
- e) a—4, b—3, c—2, d—1

7. process of sexual reproduction which involves meiosis and syngamy is (2013)

- a) Apomixis
- b) Amohimixis
- c) Agamospermy
- d) Diplospory

8. A polyestrus animal is

- a) Man
- b) Cat
- c) Rabbit
- d) Horse

9. Syngamy can occur outside the body of the organism in (2013)

- a) Mosses
- b) Algae
- c) Ferns
- d) Fungi

10. In which of the following sets of organisms, does the external fertilization occur?

- a) Echinodermata and moss
- b) Hemichordata and fern
- c) Amphibian and algae
- d) Reptile and gymnosperm

11. Gametogenesis refers to the process of

- a) Fusion of two gametes
- b) Fusion of two gametangia
- c) Formation of two types of gametes
- d) Formation of male gametes only

12. Marchantia is considered heterothallic because it is (2014)

- a) Heterogametic
- b) bisexual
- c) Monoecious
- d) Dioecious

13. The motile reproductive structures of algae and fungi, which directly give rise to new individuals are called (2014)

- a) Zygosporangia
- b) Zoospores
- c) Cysts
- d) Conidia

14. Which of the following pairs is not correctly matched? (2015)

Mode of reproduction	Example
a) Rhizome	Banana
b) Binary fission	sargassum
c) Conidia	penicillium
d) Offset	water hyacinth

15. Strobilanthes kunthiana flowered in the Nilgiri in 2006. When is it expected to flower again (2015)

- a) 2015
- b) 2018
- c) 2021
- d) 2024

16. In diplontic life cycle, meiosis occurs during (2015)

- a) Zoospore formation
- b) Zygote development
- c) spore germination
- d) gamete formation

17. Which one of the following characteristics is not shared by birds and mammals?

- a) Viviparity
- b) Warm blooded nature
- c) Ossified endoskeleton
- d) Breathing using lungs

18. In bryophytes and pteridophytes, transport of male gametes requires (2016)

- a) Birds
- b) water
- c) wind
- d) insects

SECTION D: CHAPTER –END TEST

1. Number of chromosomes in the meiocyte of onion, Potato, housefly, humans and Ophioglossum respectively are

- a) 32, 24, 12, 46, 1260
- b) 16, 12, 6, 23, 630
- c) 16, 48, 12, 46, 1260
- d) 32, 48, 12, 46, 1260

2. During his college days Panchanan Maheswari was inspired by an American missionary teacher.

- a) Dr. W. Dudgeon
- b) T.R. Malthus
- c) Charles Lyell
- d) Charles Darwin and Francis Darwin

3. P. Maheswari encouraged general education and made a significant contribution to school education by his leadership in bringing out the first textbooks of Biology for Higher Secondary School published by NCERT in

- a) 1964 b) 1966 c) 1974 d) 1986
4. Animals which possess cleidoic eggs exhibit
- a) External fertilization and internal development
b) Internal fertilization and internal development
c) Internal fertilization and external development
d) External fertilization and external development
5. In grafting, stock is
- a) Stem of desired variety
b) Bud of desired variety
c) Part of rooted plant
d) Part of to grafted
6. Identify the correct statement.
- a) Because of marked climatic variations, plants growing near the sea shore do not produce annual rings
b) The age of the plant can be determined by its height
c) Grafting is difficult in monocot plants as they have scattered vascular bundles
d) Healing of damaged tissue is because of activity of sclerenchyma cells
7. Grafting is not possible in monocots as they
- a) Lack cambium
b) Are herbaceous
c) Have scatterd vascular bundles
d) Have parallel venation
8. Which type of fertilization is found in most of the algae?
- a) External b) internal c) both a&b d) none of the above
9. Plants with poor root system are propagated through
- a) Layering b) leaf cuttings c) stem cuttings d)grafting

10. During favourable condition the encysted amoeba divides by multiple fission and produces pseudopodiospores. This phenomenon is known as

- a) Budding
 b) Sporulation
 c) Fragmentation
 d) Regeneration

11. Artificial vegetative reproduction through cutting of roots is carried out in

- a) Lemon and rose
 b) Rose and Hibiscus
 c) Tamarind and Chrysanthemum
 d) Lemon and Tamarind

12. Recognise the figure and find out the correct matching.



- a) a—conidia, b—budding, c—gemmules, d—zoospores
 b) b—conodia, c—budding, a—gemmules, d—zoospores
 c) b—conodia, d—budding, d—gemmules, a—zoospores
 d) a—conodia, d—budding, d—gemmules, a—zoospores

13. The internal buds of fresh water sponges are otherwise called

- a) choanocyte
 b) Gemmule
 c) osculum
 d) Blastula

14. Grafting is not successful in monocots but is successful in dicots because they have

- a) Vascular bundles arranged in a ring
 b) Cambium for secondary growth
 c) Vessels with elements arranged end to end

- d) Cork cambium
15. A scion is grafted on a stock. Quality of fruits produced will depend upon genotype of
- a) **Scion** b) stock c) both a&b d) None of the above
16. Stem cuttings are commonly used in the propagation of
- a) Mango b) cotton **c) rose** d) banana
17. Maximum life span of a dog in years is
- a) 5 b) 10 c) 15 **d) 20**
18. Binary fission is a type of
- a) Vegetation propagation
b) Asexual reproduction
c) Sexual reproduction
d) Nuclear fragmentation
19. Plant propagated by leaves is
- a) **Kalanchoe** b) Agave c) potato d) Gladiolus
20. Potatoes are cultivated by
- a) Seeds b) tuber **c) buds and tubers** d) bud
21. In vegetative propagation by tubers, which of the following remains constant through generation?
- a) Morphology b) vigour only
c) vigour and morphology only **d) morphology, vigour and disease resistance**
22. Induction of rooting on stems before separating them from parent plant is

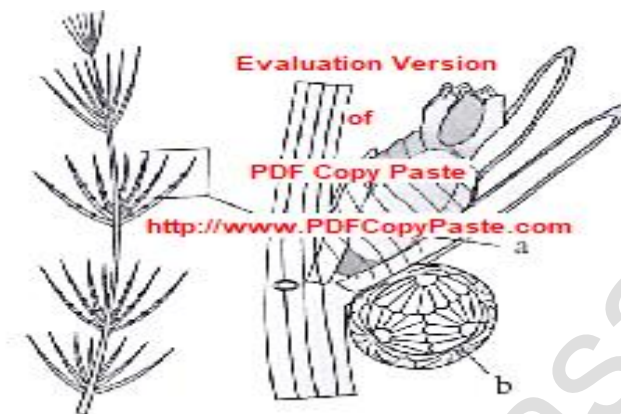
a) Grafting **b) layering** c) Cutting d) Root-stem joint
 23. Mango and Guava are propagated through

a) Tissue culture **b) Grafting** c) Steam Cuttings d) Layering

24. Chrysanthemum multiplies vegetatively by

a) **Suckers** b) Runners c) Bulbils d) Rhizomes

25. Recognise the figure and find out the correct matching.



a) a—oogonium (male sex organ), b—antheridium (female sex organ)
 b) a—antheridium (female sex organ), b—oogonium (male sex organ)
c) a—oogonium (female sex organ), b—antheridium (male sex organ)
 d) a—antheridium (male sex organ), b—oogonium (female sex organ)

26. Out of the following two methods yield genetically similar plants:

i. Stem cuttings ii. Seed production

iii. Mutation iv. Tissue culture

a) i and ii b) ii and iii **c) i and iv** d) ii and iv

27. clone is a group of individuals got through

a) self pollination b) cross pollination

c) vegetative pollination d) hybridisation

28. a piece of potato tuber will form a new plant if it has

- a) braches b) stored food c) roots **d) scales/eyes**

29. layering is used for vegetative propagation of

- a) rose **b) jasmine** c) mango d) all the above

30. Match the columns I and II, and choose the correct combination from the options given.

Column I

1. Coconut
2. Papaya
3. Tapeworm
4. Earthworm

Column II

- a. Monoecious
- b Dioecious

- a) a—1, b—2, a—3, b—4
 b) b—1, a—2, b—3, a—4
c) a—1, b—2, a—3, a—4
 d) a—1, b—2, b—3, b—4

31. Monoestrous animals have

- a) One ovulation each month
 b) One egg
c) One breeding seasons in a year
 d) One menses each month

32. A quicker regeneration of grass leaves shall occur by

- a) Cutting b) grazing c) irrigation **d) clipping**

33. A plant expected to have an age of 1500 years is

- a) Eucalyptus **b) sequoia**
 c) Mangifera indica d) Dalbergia sissoo

34. Which is not a method of vegetative propagation?

- a) Micropropagation b) budding **c) sowing** d) layering

35. Which one is found only in aquatic plant?

- a) Runner b) stolon c) tuber d) offset

36. Eye of potato is

- a) Apical bud b) axillary bud
c) accessory bud d) adventitious bud

37. Individuals of a clone have

- a) Same age
b) Same height
c) Same genome
d) Same number of leaves

38. Water hyacinth is one of the most invasive weeds found growing water wherever there is

- a) Standing water b) running water
c) marine water d) unpolluted water

39. Clone formation occurred in the bacteria in

- a) Conjugation b) transduction
c) binary fission d) all of the above

40. Asexually produced organism inheriting all the characters of the parent is

- a) Offspring b) clone c) variety d) hybrid

41. Type of asexual reproduction found in Hydra is

- a) Gemmule formation b) Sporulation
c) binary fission d) budding

42. A population of genetically identical individuals obtained from asexual reproduction is

- a) Callus **b) clone** c) deme d) aggregate

43. In majority of sexually reproducing organisms, the gametes produced are of two morphologically distinct types called

- a) Antherozoids b) heterosomes **c) heterogametes** d) homogametes

44. Estrous cycle is indications of

- a) **Breeding period** b) estrogen secretion
c) pregnancy d) menopause

45. Estrous cycle is a characteristic of

- a) Human females
b) Mammalian females
c) Mammalian females other than primates
d) Mammals

46. Menstrual cycle occurs in

- a) **Female primates** b) human females
c) mammalian females d) rabbit

47. Many mammals which are reproductively active throughout their reproductive phase are called

- a) Continuous breeders**
b) Seasonal breeders
c) Reflex breeders
d) Spontaneous breeders

48.Syngamy means

- a) Fusion of gamates
- b) Fusion of cytoplasms
- c) Fusion of two similar spores
- d) Fusion of dissimilar spores

49.Development of an organism from female gamate/egg without involving fertilization is

- a) Adventive embryony
- b) Polyembryony
- c) Parthenocarpy
- d) Parthenogenesis

50.The term parathenogenesis was coined by

- a) Grobber
- b)Balfour
- c)Boveri
- d)Owen