

O. P. JINDAL SCHOOL, SAVITRI NAGAR
Half Yearly Examination (2023– 24)

Class: XI
Subject: Biology (044)

MM: 70
Time: 3 Hrs.

Fifteen Minutes Extra will be for reading the Question Paper.

General Instructions:

- (i) *All questions are compulsory.*
(ii) *Section A has 16 questions of 1 mark each; Section B has 5 questions of 2 marks each; Section C has 7 questions of 3 marks each; Section D has 2 case –based questions of 4 marks each; and Section E has 3 questions of 5 marks each.*
(iii) *There is no overall choice. However, internal choice have been provided in some questions.*
(iv) *Wherever necessary, neat and properly labeled diagrams should be drawn.*
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SECTION-A

1. The related families are placed together in the same
- | | |
|------------|-----------|
| (a) phylum | (b) class |
| (c) genera | (d) order |
2. Cyanobacteria belong to the kingdom
- | | |
|--------------|------------|
| (a) protista | (b) fungi |
| (c) plantae | (d) monera |
3. On maturity an ovule forms a
- | | |
|----------------|---------------|
| (a) seed | (b) fruit |
| (c) embryo sac | (d) endosperm |
4. Methanogens belong to
- | | |
|---------------------|--------------------|
| (a) eubacteria | (b) archaebacteria |
| (c) dinoflagellates | (d) slime moulds |
5. Which of the following is the site of protein synthesis?
- | | |
|---------------|-----------------|
| (a) DNA | (b) nucleolus |
| (c) ribosomes | (d) chloroplast |
6. Which of the following is the smallest region of the root
- | | |
|-------------------------------------|--------------------------|
| (a) Root cap | (b) Region of elongation |
| (c) Region of meristematic activity | (d) Region of maturation |
7. Club –fungi is
- | | |
|--------------------|--------------------|
| (a) phycomycetes | (b) deuteromycetes |
| (c) basidiomycetes | (d) ascomycetes |

8. The spores that help fungi to undergo asexual reproduction during favourable conditions is

- (a) zoospores
- (b) aplanospores
- (c) conidia
- (d) all of the above

9. Sexual reproduction in Ascomycetes occurs through

- (a) somatogamy of zoospores
- (b)isogamy of zoospores
- (c)anisogamy of ascospores
- (d)Both (b) and (c)

10 .Malpighian tubules are

- (a) Excretory organs of insects
- (b)Excretory organs of frog
- (c)Respiratory organs of insects
- (d)Endocrine glands of insects

11. New cells arise from

- (a)Bacterial fermentation
- (b)Regeneration of old cells
- (c) Pre-existing cells
- (d)Abiotic materials

12. The term ' polyadelphous ' is related to

- (a) gynoecium
- (b) androecium
- (c) corolla
- (d) calyx

Direction (Q.No. 13-16) Assertion –Reasoning type questions. Mark the correct answer as

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true ,but R is not the correct explanation of A
- (c) A is true,but R is false
- (d) Both A and R are false

13.Assertion(A) Species is a group of individuals with fundamental similarities.

Reason (R) indica, leo, tuberosum represent such group of individuals.

14.Assertion(A) The racemose type of inflorescence the main axis grows indefinitely.

Reason (R) Main axis is not terminated by flower.

15.Assertion(A) Classification is necessary to study all living organisms.

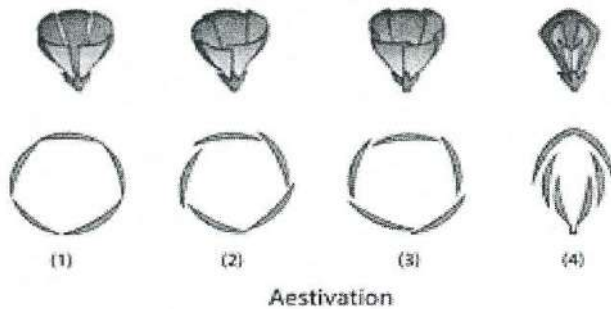
Reason(R) In classification , individuals are grouped into categories.

16.Assertion(A) Deuteromycetes is known as fungi imperfecti.

Reason (R) In Deuteromycetes , only the asexual phase is known.

SECTION-B

17.(i) Identify which type of aestivation is being depicted by 1,2,3 and 4.



(ii) Name and describe the type of aestivation observed in

(a) Cassia

(b) China rose

18.(i) Explain binomial nomenclature giving an example.

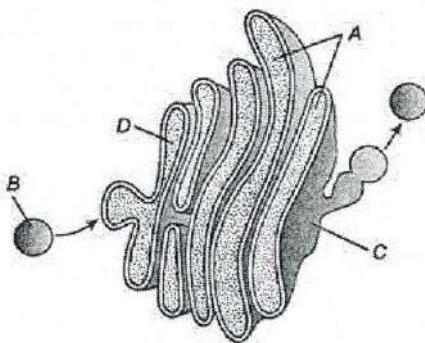
(ii) Why are common names not employed in scientific studies?

19.(i) What is the basis of classification of algae ?

(ii). 'Bryophytes are referred to as amphibians of plant kingdom'. Justify the statement.

20. Golgi apparatus consist flat, disc-shaped, parallelly stacked structure, possess ,cis and trans faces.

Observe the figure carefully and answer the following questions.



(i) Identify the labels A,B,C and D.

(ii) What is the function of Golgi apparatus ?

21. How useful is the study of the nature of body cavity (coelom) in the classification of animals ?

OR

How important is the presence of pneumatic bones in aves?

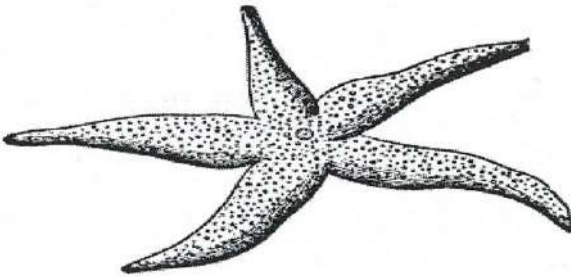
SECTION- C

- 22(i) Diatoms are called as pearls of ocean. Why? What is diatomaceous earth?
(ii) What is the nature of cell wall in diatoms?
(iii) Fusion of two gametes which are dissimilar in size is termed as.

23. "All vertebrates are chordates but all chordates are not vertebrates". Justify the statement.

OR

Observe the diagram shown below.



- (i) Identify the organism shown in the diagram.
(ii) Name the phylum to which this organism belongs.
(iii) Write distinctive feature of the organism.
24. Write three characteristic features of Euglenoids.
25. What is heterospory? Briefly comment on its significance.
26. (i) What are mitochondria? What is the basic morphology of these organelles and in which cell can they be found?
(ii) Justify the statement, "mitochondria are the power house of the cell".
27. Define phyllotaxy. Describe the types of phyllotaxy found in plants with diagram.

OR

Describe the arrangement of floral members in relation to their insertion on thalamus.

28. Explain the structure of stomata in dicot plant with well labelled diagram.

OR

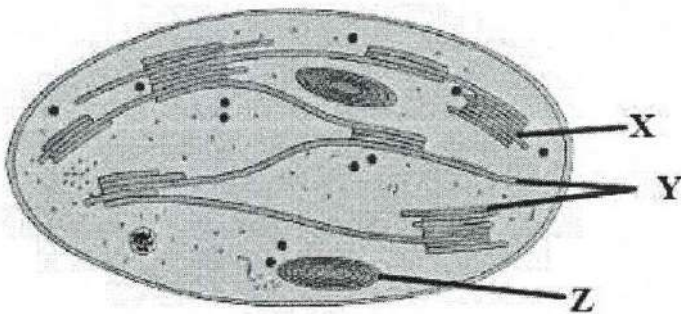
Draw well labelled diagram of T.S of dicot leaf.

SECTION-D

29. Diverse group of animals have been classified into nine major phyla and eight of them are invertebrates whereas the one phylum constitutes vertebrates. The former lack a backbone whereas the latter is characterized by a backbone. The level of complexity of features complicates from lower phylum to upper phylum with few exceptions.

- (i) Define the term diploblastic and triploblastic ?
- (ii) Name the largest phylum of invertebrates.
- (iii) Write two characteristic feature of chordates.

30. Plastids are cell organelles found in plant cell. Depending upon function it performs ,it is of multi types some have specific pigments ,thus impart colour to plant, while some store food. They are also called semiautonomous organ.



- (i) Why plastids are called as semiautonomous organelles ?
- (ii) Identify the labels X and Y .
- (iii) Why the lumen of thylakoids are acidic in nature ,whereas the stroma is alkaline in nature ?

SECTION-E

31. What is Taxonomic hierarchy? Describe 7 hierarchial categories giving an example of plant / animal.

OR

On what basis are the chromosomes inside the cell classified? Explain their types with well labelled diagram.

32. What is placentation? Describe various types of placentation in plants with diagram.

OR

Describe the vegetative characters of Solanaceae family. Also, write economic importance of Solanaceae.

33. Describe T.S of a monocot root with well labelled diagram.

OR

Explain cellular sketch of T.S of a dicot stem with well labelled diagram.
