4

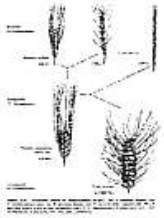
2) Name the processes:

a) Evolution may occur by rapid bursts followed by periods of tranquility
Punctuated equilibria

b) The many different species of silverswords in Hawaii are an example of the evolutionary process known as Radiation

c) Following hybridization, some terrestrial plants can produce embryos asexually that are identical genetically to the female parent, in a process known as apomyxis

d) The process contributing to evolution of the many types of wheat illustrated; Polyploidy



3

3) a) Name a specific location where either living or fossil stratoliths could be observed today
Ottawa River (fossil) Australia (live)

b) What type of algae produce them Cyanobacteria

c) What was the environment change that occurred as these algae evolved. O2 revolution.

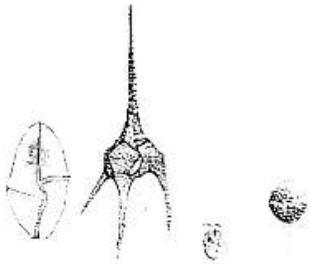
2

6) a) What is the function of phycoerythrin in red algae accessory pigment / absorbs blue light
b) What is its ecological importance allows algae to live in deep water

6

7) Which organism(s) illustrated
a) has similar pigmentation to higher plants A
b) has a persistent membrane and no spindle in mitosis B
c) has a fairly recent symbiotic origin A
d) has similar cell wall composition to *Equisitum* (horse tails) D
e) are major marine primary producers B C

A



B

C

5

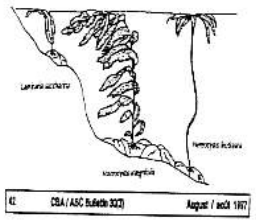
8a) The large marine algae illustrated here are members of which group Brown Algae

b) Due to convergent evolution, these algae have a tissue similar to terrestrial plants. What is the tissue Phloem

c) What is its function Sugar transport

d) Which generation is illustrated e? Sporophyte

e) What is the useful product is harvested from this group Algin



her

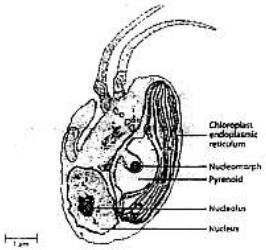
4

8) a)How did this organism acquire both a nucleus and nucleomorph Symbiosis c redalga

b)What phyllum (division) does it belong to. Chryptophyta

c)Identify a ~~characteristic~~ pigment in the chloroplast. Phycoerythrin

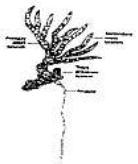
d) What is the composition of its exterior structure. protein



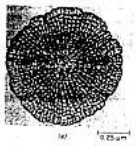
2

9) Why was A originally considered a candidate for terrestrial plant ancestor? Grows on mud flats in air

What character now identifies B as the more likely ancestor has phragmoplast as do higher plants



A



B

Plus multiple choice questions!