

biology (Test)  
13 Apr 2020

Classrooms: AI, R1

1) 3	2) 2	3) 3	4) 4	5) 1	6) 2	7) 4	8) 1	9) 1	10) 2	11) 2	12) 3	13) 2	14) 3	15) 3
16) 2	17) 4	18) 4	19) 1	20) 3	21) 2	22) 4	23) 4	24) 3	25) 4	26) 4	27) 2	28) 2	29) 4	30) 4

Solution :-

- 1)

Among the eight essential microelements, the last one is Nickel. It is essential for the formation of some enzymes like Urease which converts Urea Nitrogen into Usable ammonia within the plant. But it is required in least quantities in comparison with others
- 2)

Flocs are masses of aerobic bacteria and fungi that help in the biological treatment of sewage. So, the correct answer is 'Aerobic bacteria and fungus'
- 4)

The ribosomes found in chloroplasts and mitochondria of eukaryotes also consist of large and small subunits bound together with proteins into one 70S particle. These organelles are believed to be descendants of bacteria and, as such, their ribosomes are similar to those of bacteria.
- 5)

Gametogenesis, Gamete transfer, syngamy and embryogenesis are the sequential events in sexual reproduction
- 7)

Cycas is considered living fossil as it closely resembles organisms known only from fossil record.
- 8)

1) Human urine -Auxin  
2) *Gibberella fujikuroi*-Gibberellins  
3) Herring fish DNA-Cytokinin  
4) Ripening fruits-Ethylene  
5) Aged leaves of plants-Abscisic acid
- 10)

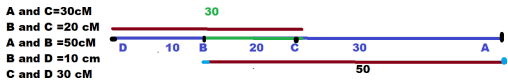
In sugarcane, primary  $CO_2$  combines with PEP and forms 4C compounds oxalo acetic acid (OAA). Later on, OAA converts into another 4C compound malic acid. This reaction is catalysed by PEP carboxylase.
- 11)

Poaceae is the family of wheat, and poales is the order.

- 12)

a) Aloe - Liliaceae  
b) Belladonna - Solanaceae  
c) Muliathi - Fabaceae  
d) Ashwagandha - Solanaceae
- 13)

As per the data given  
A and C=30cM  
B and C =20 cM  
A and B =50cM  
B and D =10 cM  
C and D 30 cM  
The arrangement of the ABCD gene on the chromosome is DBCA


- 14)

" A single-stranded DNA or RNA, tagged with a radioactive molecule (probe) is allowed to hybridise its complementary DNA in a clone of cells followed by detection using autoradiography." The clone having mutated gene will not appear on the photographic film.
- 17)

Ruptured graafian follicle converts into yellow tissue called Corpus luteum, that secrete progesterone hormone
- 22)

Mycorrhizae are association between fungi and roots of higher plants. The fungi help the plant in the absorption of essential nutrients from the soil and plant in turns provides the fungi with energy - yield carbohydrates
- 24)

Termites are called white ants. As they are collectively working together hence called social insects.
- 29)

Residual volume (1200 mL) is greater than tidal volume (500 mL).