



Nagarjuna Pre University College

biology (Test)

13 Apr 2020

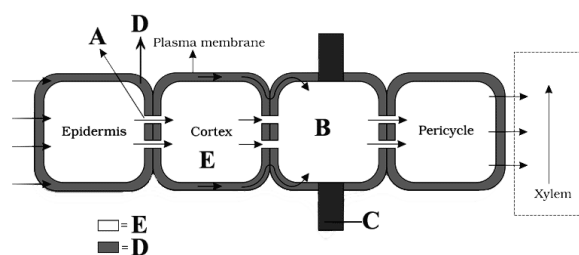
1) Element required in the least quantity is

- (1) Zn
- (2) Mn
- (3) Ni
- (4) Cl

2) The microorganisms involved in floc formation during sewage treatment are

- (1) Anaerobic bacteria and fungus
- (2) Aerobic bacteria and fungus
- (3) Autotrophic bacteria and yeast
- (4) Fungus and algae

3) In the given flow chart, the pathway of water movement is shown from soil to xylem. Identify A-E the correct option accordingly



- (1) A-Stomatal pore, B-Endodermis, C-Casperian strip, D-Symplast, E-Apoplast
- (2) A-Plasmodesmata, B-Palisade, C-Medullary rays, D-Symplast, E-Apoplast
- (3) A-Plasmodesmata, B-Endodermis, C-Casperian strip, D-Apoplast, E-Symplast
- (4) A-Stomatal pore, B-Guard cell, C-Medullary rays, D-Apoplast, E-Symplast

4) The type of ribosomes found inside the mitochondrion is

- (1) 90S
- (2) 60S
- (3) 80S
- (4) 70S

5) The correct sequence of events that occur during sexual reproduction

- I) Embryogenesis
- II) Syngamy
- III) Gametogenesis
- IV) Gamete transfer

- (1) III, IV, II, I
- (2) III, II IV, I
- (3) I, II, IV, III
- (4) III, II, IV, I

6) Which one of the following option gives the correct categorisation of three steps (ABC) of Respiration

- (1) A Glycolysis -Matrix B TCA-cycle -Cytosol C ETS -Cristae
- (2) A Glycolysis -Pyruvate B TCA-cycle -2, CO₂ C ETS -34 ATP

(3) A Glycolysis -PS-I B TCA-cycle -3 NADH₂ 4.FADH₂ C ETS - Matrix

(4) A Glycolysis -10step B TCA-cycle -12 ATP C ETS -Without O₂

7) Which of the following is living fossil?

- (1) Moss
- (2) *Saccharomyces*
- (3) *Spirogyra*
- (4) *Cycas*

8) Match the following.

Column I	Column II
1. Human urine	a. Cytokinin
2. Gibberella fujikuroi	b. Auxin
3. Herring fish DNA	c. Ethylene
4. Ripening fruits	d. Absciscic acid
5. Aged leaves of plants	e. Gibberellins

- (1) 1-b,2-e, 3-a,4-c,5-d
- (2) 1-b,2-c,3-d,4-e,5-a
- (3) 1-a,2-e,3-b,4-d, 5-c
- (4) 1-e,2-d,3-c,4-b, 5-a

9) Inflorescence axis with limited growth is found in

- (1) Cymose inflorescence
- (2) Racemose inflorescence
- (3) Special inflorescence
- (4) All the above

10) In Sugarcane, ¹⁴CO₂ is fixed in malic acid. The enzyme is

- (1) RuBP carboxylase
- (2) PEP carboxylase
- (3) Ribulose phosphate kinase
- (4) Fructose phosphatase

11) Which of the following organisms is not correctly matched with its particular taxonomic hierarchy?

- (1) Mango - Mangifera - Genus
- (2) Wheat - Poaceae - Order
- (3) House fly - Muscidae - family
- (4) Man - Primata - Order

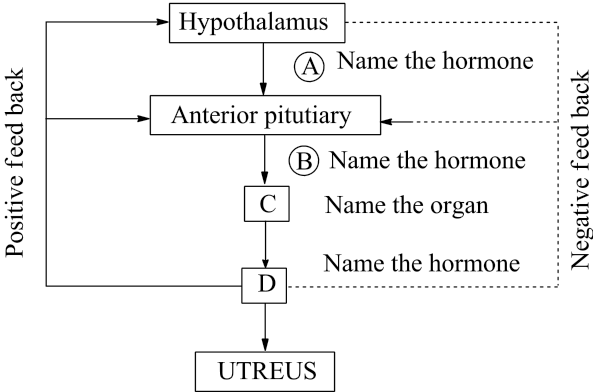
12) Match the following.

Column I (Medicinal plant)	Column II (Family)
a. Aloe	1. Brassicaceae
b. Belladonna	2. Fabaceae
c. Muliathi	3. Solanaceae
d. Ashwagandha	4. Liliaceae

- (1) a-I, b-2,c-3,d-4

- (2) a-4,b-3,c-2,d-1
- (3) a-4, b-3,c-2,d-3
- (4) a-4,b-2,c-3,d-3
- 13) The map distance between A and C = 30 cM, B and C = 20 cM, A and B is 50 cm, B and D = 10 cM C and D = 30 cM. What is the arrangement of ABCD gene on chromosome
- (1) ABCD
- (2) DBCA
- (3) BACD
- (4) CABD
- 14) A single-stranded DNA or RNA, tagged with a radioactive molecule is allowed to hybridize to it complementary DNA in a clone of cells followed by detection using
- (1) Polymerase chain reaction
- (2) Biolistic or gene gun
- (3) Autoradiography
- (4) DNA fingerprinting
- 15) Classification of animals based on evolutionary relationship is called
- (1) Artificial system
- (2) Natural system
- (3) Phylogenetic system
- (4) Numerical taxonomy
- 16) Short term immunity is provided by
- (1) Lysozyme
- (2) Serum
- (3) Vaccine
- (4) Colostrum
- 17) Which one functions as endocrine gland after ovulation?
- (1) Stroma
- (2) Vitelline membrane
- (3) Germinal epithelium
- (4) Graafian follicles
- 18) An abnormal human body with 'XXX' sex chromosomes was born due to
- (1) Fusion of two ova and one sperm
- (2) Fusion of two sperms and one ovum
- (3) Formation of abnormal sperms in the father
- (4) Formation of abnormal ova in the mother
- 19) Which one is correctly matched
- (1) Vit. E - Tocoferol
- (2) Vit . D - Riboflavin
- (3) Vit B - Calciferol
- (4) Vit A - Thiamine
- 20) Enzyme lactase occurs in
- (1) Saliva
- (2) Pancreatic juice
- (3) Intestinal juice
- (4) Stomach
- 21) A reptilian that looks like a house lizard is sitting on a plant with its tail coiled around a twig. Can you identify the animal?

- (1) Garden lizard (Calotes) showing camouflage
- (2) Chamaeleon showing protective colouration
- (3) Varanus showing mimicry
- (4) Hemidactylus showing sexual dimorphism
- 22) Mycorrhizae are the example of
- (1) Fungistasis
- (2) Amensalism
- (3) Antibiosis
- (4) Mutualism
- 23) Vomiting centre is located in
- (1) Stomach
- (2) Spinal cord
- (3) Intestine
- (4) Medulla oblongata
- 24) Which one of the following groups comes under social insects?
- (1) Mosquito
- (2) Scorpion
- (3) Termites
- (4) Cockroach
- 25) In man, oxyntic cells secrete
- (1) HCl only
- (2) Proenzymes
- (3) Castle's intrinsic factor only
- (4) HCl & Castle's Intrinsic Factor
- 26) Match the following.
- | Column - A | Column - B |
|----------------------|-----------------|
| i) Dorsal sclerite | a) Gonapophysis |
| ii) Ventral sclerite | b) Forewings |
| iii) Phallomere | c) Tergites |
| iv) Tegmina | d) Sternite |
- (1) i-a ii-b iii-c iv-d
- (2) i-b ii-c iii-a iv-d
- (3) i-d ii-a iii-c iv-b
- (4) i-c ii-d iii-a iv-b
- 27) Given below is an incomplete flowchart showing the influence of hormones on gametogenesis in human females. Identify A, B, C and D.



- (1) A- FSH, B- LH, C- Ovary, D- Progesterone
- (2) A- GnRh, B- FSH and LH, C- Ovary, D- Estrogen and progesterone
- (3) A-GnRH, B- FSH, C-Testis, D-Testosterone
- (4) A-LH, B-FSH, C- tTstis, D- Testosterone
- 28) The last part of the oviduct that joins the uterus is called

- (1) Infundibulum
 - (2) Isthmus
 - (3) Ampulla
 - (4) Fimbriae
- 29) Residual volume is
- (1) Lesser than tidal volume
 - (2) Greater than inspiratory volume
 - (3) Greater than vital capacity
 - (4) Greater than tidal volume
- 30) Which one of the following best describes polygenic inheritance?
- (1) ABO blood group in human and flower colour of *Mirabilis jalapa*
 - (2) Hair pigment of mouse and tongue rolling in humans
 - (3) Human eye colour and sickle - cell anaemia
 - (4) Human height and colour of skin and eyes