

FINAL BioChem

Dr 2017

1 Vitamin D has a similar mechanism to vitamin A, which of vitamin d derivatives works as a hormone :

- a) retinal
- b) retinol
- c) retinoic acid
- d) cholecalciferol
- e) a+b

2-Fragility of RBCs caused by deficiency of

- a) vit D
- b) vit A
- c) vit E
- d) vit K
- e) vit B12

3-The active form of vitamin D is

- a) Ergocalciferol
- b) cholecalciferol
- c) 1,25-dihydroxycholecalciferol
- d) 25-hydroxycholecalciferol

4-which of the following inhibits complex V

- a) cyanide
- b) oligomycin
- c) antimycin
- d) rotenone
- e) amytal

5- carry electrons from complex 3 to 4 in ETC

- a- CoQ
- b- H₂O
- c- cytochrome C
- d- cytochrome b

6- after 30 hours of fasting glucose level is maintained by ?

- a- gluconeogenesis + glycogenolysis
- b- glycogenolysis
- c- gluconeogenesis
- d- amino acids degradation

7- all of the following produces ROS except :-

- a- CoQ in normal respiratory chain
- b- oxidases
- c- ionizing radiation
- d- respiratory burst
- e- lactic acid formation

8 something wrong about pentose phosphate pathway (PPP)

- a- necessary for synthesis of steroid hormones in testis and ovaries
- b- produce intermediates of glycolysis
- c- NADPH inhibits it
- d- produces NADPH in the reversal pathway

9- Glycerol phosphate + X -----> Y + Z, x+y+z represents respectively

- a- FAD+DHAP+FADH₂
- b- NAD⁺ +glyceraldehyde3phosphate+NADH₂
- c- NADP+DHAP+NADPH
- d- NAD⁺ +DHAP+NADH

10- true about gluconeogenesis

- a- activated by acetyl CoA
- b- activated by AMP
- c- activated by F-2,6 BP
- d- inhibited by citrate

11-ATP produced at the substrate level by:

- a- ETC
- b- pyruvate kinase
- c- glucose kinase
- d- oxidative phosphorylation

12-amide group in ceramide comes from

- a- serine
- b- phosphatidyl choline
- c- sphingomyelin
- d- glutamine
- e- glutamate

13-methylmalnonyl CoA to succinyl CoA requires

- a- racemase
- b- biotin
- c- vit B12
- d- TPP

14- produces diacyl glycerol and inositol 3 phosphate from PIP2

- a- phospholipase b b- phospholipase d
- c- phospholipase a d- phospholipase c

15- phosphatidyl serine is produced from phosphatidylethanolamine by

- a- carboxylation b- decarboxylation
- c- methylation d- polar head exchange
- e- more than one of the above

16- butyric acid is formed by synthase by which of the following :-

- a- oxidation of long fatty acid b- condensation of malonyl and acetyl

17-in the final step of ketone body synthesis the products are acetoacetate and ?

- a- DHAP b- acetone
- c- 3-hydroxybutyrate d- acetyl CoA

18-ture about acetyl coA carboxylation

- a- don't require ATP b- exergonic
- c- require ATP d- B+C

19-TAG is produced in adipose tissue, which is true ?

- a- needs NADPH b- needs active glycolysis
- c- needs glycerol kinase d- b+c

20- statin drugs act on

- a- inhibits reabsorption b-HMG CoA reductase
- c- bind to bile acid

21-steatic acid is converted to oliec acid requires ?

- a- FAD B- O2
- C- NAD+ D- B+C

22-something true about fatty milk

- a- digestion begins in mouth
- b- digestion begins in the stomach
- c- long chain fatty acid

23- something true about lipoproteins

- a- chylomicron has the lowest apolipoprotein percentage
- b- chylomicron has the lowest TAG
- C- HDL has the lowest apolipoprotein percentage

24- in HDL cholesterol is esterified from :-

- a- acetyl CoA
- b- phosphatidyl choline or lecithin
- c- phosphatidylethanolamine

25- which of the following forms VIT D by exposure to sun light

- a- 7-dehydrocholesterol
- b- 1,25-.....
- c- vit A

26-TAY SACHS disease results from accumulation of

- a- gangliosides
- b- sphingomyelin
- c- cerebroside

27-histamine is synthesized from histidine by :-

- a- decarboxylation
- b- amination
- c- deamination
- d- carboxylation

28- choose the wrong relation

- a- ALT+ AST with liver disease
- b- ALT with myocardial infarction

29- all of the following requires methylation except

- a- CTP
- b- dTMP
- c- creatine
- d- epinephrine

30- nucleotides modifications cause all except

- a- gene expression
- b- Transcription protein binding
- c- Protection from degradation
- d- digestion of nucleotides

31- true about the enzyme that produces deoxyribonucleotide

- a- atp is a competitive activator
- b- inhibited by hydroxyurea
- c- datp is a competitive activator

32-IMP is converted to GMP by the transfer of amine group from

- a- glutamine
- b- glutamate
- c- aspartate
- d- alanine

33-Mismatch between the amino acid and its synthesis

- a- PHE-Thr hydroxylation
- b- Asn-Asp amidation

34-Intracellular protein degradation mechanism

- a- ubiquitin enzyme for tagging and degradation
- b- requires ATP

35-Something true about urea cycle

- a- N-acetylglutamic acid is initiator of the cycle
- b- activated by rich protein diet

36-Something about CPS II if got inhibited

- a- less pyrimidine de novo synthesis
- b- less purine de novo synthesis
- c- less pyrimidine salvage

37-true sentence about amino acid digestion :-

- a- mono peptides are absorbed by diffusion
- b- Di-Peptides are taken up by H⁺-Linked transport system
- c- mono peptides enter the portal system by NA⁺ linked transport

38-Gilbert's syndrome :

Deficiency in bilirubin diglucuronosyltransferase

39hyperPHE caused by :- Dihydropteridine reductase

40-sth about the LESCH NYHAN syndrome :- increases uric acid

41- Heme synthesis: some drugs activate it and lead and hemirn inhibit it?

41-alkaponurea with ----Homogentisic Acid , Homogentisic Acid Oxidase

42- something about MAO:- INCREASE HMV

43- methotrexate act on one of the following conversion of dihydrofolate to tetrahydrofolate

44-wrong statement that aldose reductase convert galactose to sorbitol

1	2	3	4	5	6	7	8	9	10
c	c	c	b	c	c	e	d	d	A

11	12	13	14	15	16	17	18	19	20
b	a	c	d	d	b	d	c	b	B

21	22	23	24	25	26	27	28	29	30
b	b	a	b	a	a	a	b	a	D

31	32	33	34	35	36	37
b	a	a	b	b	a	b