

# FINAL ANSWER KEY

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Question1:-Dr. Gundert is associated with which of the following?

- A:-London Mission Society
- B:-Basel Evangelical Mission
- C:-Church Mission Society
- D:-Prussian Missionary

Correct Answer:- Option-B

Question2:-Who is the first editor of Swadesabhimani started by Vakkom Moulavi?

- A:-K.Ramakrishnapillai
- B:-C. Krishnapillai
- C:-C.P. Govindapillai
- D:-S. Padmanabha Panicker

Correct Answer:- Option-C

Question3:-In which conference did Sree Narayana Guru give the slogan "Not to argue and win but to know and make known"?

- A:-All Kerala Fraternity Conference at Aluva, 1921
- B:-All Kerala Industrial Conference at Cannanore, 1909
- C:-Superstition Eradication Conference at Kollam
- D:-All Religious Conference at Aluva, 1924

Correct Answer:- Option-D

Question4:-Mokshapradipam is a work written by

- A:-Vagbhadananda
- B:-Kumaran Asan
- C:-Brahmananda Sivayogi
- D:-Sankaracharya

Correct Answer:- Option-C

Question5:-Name the great social reformer who is said to have inspired the Shanar agitation for social equality?

- A:-Vaikunda Swamikal
- B:-E.V. Ramaswami Naicker
- C:-Poikayil Yohannan
- D:-Thaikkattu Ayyavu

Correct Answer:- Option-A

Question6:-When was the Malayali Memorial submitted to the Travancore Maharaja?

- A:-11 January 1891
- B:-1 January 1891
- C:-1 September 1891
- D:-11 September 1891

Correct Answer:- Option-A

Question7:-Aphante Makal is a novel written by

- A:-V.T. Bhattathiripad
- B:-Lalithambika Antaranam
- C:-Bhavatratan Namboothiripadu
- D:-Karur Nilakantapillai

Correct Answer:- Option-C

Question8:-The leader of the Akalis who led the Sikhs in the Vaikom Satyagraha?

- A:-Gur Charan Singh
- B:-Lala Lal Singh
- C:-Lala Jai Singh
- D:-Mr. Amar Singh

Correct Answer:- Option-B

Question9:-Karmavipakom is the autobiography of

A:-Karoor Nilakantan Namboothiripad

B:-V.T. Bhattathiripad

C:-M.C. Joseph

D:-Sahodaran Ayyappan

Correct Answer:-**Question Cancelled**

Question10:-The only Christian Satyagrahi who participated in the Vaikom Satyagraha and who was asked to quit the movement by Mahatma Gandhi?

A:-Barister George Joseph

B:-M.O. Mathai

C:-Kandathil Varghese Mappilai

D:- Joseph Pulikkunnel

Correct Answer:- Option-A

Question11:-Mitavadi was started by

A:-C. Krishnan

B:-C. Kesavan

C:-Kunhiraman Nair

D:-T. Sivasankaran

Correct Answer:- Option-D

Question12:-Who is known as 'Kesari'?

A:-C.V. Kunhiraman Nair

B:-E.M. Kovur

C:-M.R. Nair

D:-Vengayil Kunhiraman Nair

Correct Answer:- Option-D

Question13:-Who founded Malabar Economic Union?

A:-T.K. Madhavan

B:-Dr. P. Palpu

C:-Moorkkothu Kumaran

D:-Sahodaran Ayyappan

Correct Answer:- Option-B

Question14:-Jeevithasamaram is the autobiography of

A:-A.K. Gopalan

B:-C. Kesavan

C:-E.M.S. Namboodiripad

D:-K. Kelappan

Correct Answer:- Option-B

Question15:-Pattabakki is a drama written by

A:-P. Krishnapillai

B:-Kesava Dev

C:-Thakazhi

D:-K. Damodaran

Correct Answer:- Option-D

Question16:-Who is the founder of SEWA?

A:-Swarnakumari Devi

B:-Ramabhai Saraswathi

C:-Ela Bhatt

D:-Devi Chaudhurani

Correct Answer:- Option-C

Question17:-Protection of Women from Domestic Violence Act was passed in the year ?

A:-2005

B:-2006

C:-2011

D:-2012

Correct Answer:- Option-A

Question18:-ILO is situated at

A:-Rome

B:-Geneva

C:-Washington

D:-Paris

Correct Answer:- Option-B

Question19:-Article 32 of the Indian Constitution deals with

A:-Right to Property

B:-Directive Principles of State Policy

C:-Right to Constitutional Remedies

D:-Freedom of Religion

Correct Answer:- Option-C

Question20:-Who wrote the book A Passage to England?

A:-E.M. Foster

B:-Nirad C. Chaudhuri

C:-Kushwanth Singh

D:-R.K. Narayan

Correct Answer:- Option-B

Question21:-Which one of the following is NOT a constituent of lung surfactant?

A:-Dipalmitoyl lecithin

B:-Sphingomyelin

C:-Cholesterol

D:-Phosphatidyl glycerol

Correct Answer:-**Question Cancelled**

Question22:-Which one of the following molecular techniques is used to detect a specific RNA?

A:-Southern blot technique

B:-Northern blot technique

C:-Western blot technique

D:-In situ hybridization

Correct Answer:- Option-B

Question23:-Which one of the following features about genetic code is INCORRECT?

A:-Non-degenerate

B:-Non-ambiguous

C:-Non-overlapping

D:-Continuous

Correct Answer:- Option-A

Question24:-Which one of the following conditions results from defective alpha oxidation?

A:-Methyl malonic aciduria

B:-Glutaric aciduria

C:-Refsum's disease

D:-Propionic acidemia

Correct Answer:- Option-C

Question25:-Which one of the following amino acids is purely ketogenic?

A:-Leucine

B:-Isoleucine

C:-Lysine

D:-Phenyl alanine

Correct Answer:- Option-A

Question26:-All the following conditions show low serum AFP level EXCEPT

A:-Down syndrome

B:-Anencephaly

C:-Trisomy 18

D:-Turners syndrome

Correct Answer:- Option-B

Question27:-All the following statements regarding glutathione are true EXCEPT

A:-It favours the absorption of neutral amino acids in the intestine

B:-It inactivates insulin

C:-It is an atypical tripeptide

D:-It plays an important role in free radical scavenging

Correct Answer:- Option-B

Question28:-Which one of the following is NOT a post-transcriptional modification?

A:-5' capping

B:-Poly-A tailing

C:-Acetylation

D:-Methylation

Correct Answer:- Option-C

Question29:-Select the FALSE statement regarding phosphofructokinase 1.

A:-It is activated by AMP

B:-Fructose 2,6 bisphosphate inhibits this enzyme

C:-During starvation the synthesis of this enzyme is repressed

D:-Fructose 6 phosphate activates this enzyme

Correct Answer:- Option-B

Question30:-All the following statements regarding pentose phosphate pathway is correct EXCEPT

A:-Glucose-6-phosphate dehydrogenase is the rate limiting enzyme of the pathway

B:-In RBCs it is the only source of NADPH for free radical scavenging

C:-No ATP is produced in this pathway

D:-Glucose-6-phosphate dehydrogenase is inhibited by insulin

Correct Answer:- Option-D

Question31:-Which one of the following statements about glycogen metabolism is INCORRECT?

A:-Glucagon enhances glycogenolysis in muscle

B:-Epinephrine enhances glycogenolysis in liver and muscle

C:-Glycogenolysis in liver will lead to increase in blood glucose level

D:-Pyridoxal phosphate is essential for glycogenolysis in muscle

Correct Answer:- Option-A

Question32:-Regarding pancreatic lipase the INCORRECT statement is

A:-It is a glycoprotein

B:-It's serum level is increased in renal insufficiency

C:-It has a specificity of 80-100% in diagnosing acute pancreatitis

D:-It's serum level increases within 8 to 12 hours and reaches a peak by 48 hours after an acute attack of pancreatitis

Correct Answer:- Option-D

Question33:-Which is the soluble storage form of iron in tissues?

A:-Ferritin

B:-Transferrin

C:-Hemosiderin

D:-Haptoglobin

Correct Answer:- Option-A

Question34:-Black liver jaundice is seen in

A:-Dubin Johnson syndrome

B:-Rotor syndrome

C:-Gilbert's disease

D:-Crigler-Najjar syndrome

Correct Answer:- Option-A

Question35:-Select the neurotransmitter synthesized from tyrosine

A:-GABA

B:-Melatonin

C:-Dopamine

D:-Serotonin

Correct Answer:- Option-C

Question36:-Which of the following is used for staining DNA fragments in electrophoresis?

A:-Coomassie Brilliant Blue

B:-Nitrotetrazolium Blue

C:-Silver Nitrate

D:-Ethidium Bromide

Correct Answer:- Option-D

Question37:-Which liver enzyme is best for detecting biliary obstruction?

A:-Alanine amino transferase

B:-Alkaline phosphatase

C:-Nucleotide phosphatase

D:-Gamma glutamyl transferase

Correct Answer:- Option-C

Question38:-Which of the following statement is NOT true regarding oncogenes?

A:-Mutation in one of the two alleles is sufficient to produce oncogenic effects

B:-Oncogenic effect is due to gain of function of a protein that stimulates cell growth and proliferation  
C:-Mutations in oncogenes may be present in somatic or germ cells  
D:-Usually do not show tissue preference with respect to the type of cancers in which they are found  
Correct Answer:- Option-C

Question39:-All the following are multienzyme complexes EXCEPT

A:-Pyruvate carboxylase  
B:-Alpha keto dehydrogenase  
C:-Acetyl Co A carboxylase  
D:-Pyruvate kinase

Correct Answer:- Option-D

Question40:-Which of the following is an example for non-competitive inhibition?

A:-Allopurinol inhibits xanthine oxidase  
B:-Fluoride inhibits enolase  
C:-5-fluorouracil inhibits thymidylate synthase  
D:-Lovastatin inhibits HMG Co A reductase

Correct Answer:- Option-B

Question41:-Which of the following is NOT a serine protease?

A:-Trypsin  
B:-Thrombin  
C:-Carbonic anhydrase  
D:-Chymotrypsin

Correct Answer:- Option-C

Question42:-Which is the best marker of ventricular dysfunction?

A:-CK-MB  
B:-Cardiac troponin I  
C:-Brain natriuretic peptide  
D:-Myoglobin

Correct Answer:- Option-C

Question43:-Select the glucose transporter that is insulin dependent.

A:-GLUT 2  
B:-GLUT 4  
C:-GLUT 5  
D:-SGLT 1

Correct Answer:- Option-B

Question44:-Which of the following statement is FALSE regarding mitochondrial DNA?

A:-Majority of the mitochondrial proteins are coded by mitochondrial DNA  
B:-Mitochondrial DNA have high mutation rate than nuclear DNA  
C:-Mitochondrial cytopathies show a maternal non-mendelian inheritance  
D:-Mitochondrial DNA shows heteroplasmy

Correct Answer:- Option-A

Question45:-Regarding p53 all the statements are true EXCEPT

A:-Is a DNA binding transcription factor  
B:-Induces the genes that induce apoptosis  
C:-Is the least mutated genes in human cancers  
D:-Is a tumor suppressor gene

Correct Answer:- Option-C

Question46:-Regarding apoptosis, select the FALSE statement.

A:-Cytochrome c is an inducer of apoptosis  
B:-bcl-2 is an apoptosis protecting gene  
C:-Caspase 3 is the initiator caspase of apoptosis  
D:-Ceramide is an important regulator of apoptosis

Correct Answer:- Option-C

Question47:-Which one of the following is a chain breaking anti-oxidant?

A:-Catalase  
B:-Vitamin E  
C:-Glutathione peroxidase  
D:-Ethylenediaminetetraacetate

Correct Answer:- Option-B

Question48:-Select the enzyme that is NOT present in the liver.

- A:-HMG Co A lyase
- B:-HMG Co A synthase
- C:-Thiolase
- D:-Thiophorase

Correct Answer:- Option-D

Question49:-Linoleic acid is considered to be a nutritionally essential fatty acid in humans BECAUSE

- A:-It is an omega 3 fatty acid
- B:-In humans double bond cannot be introduced at  $\Delta^6$  position
- C:-In humans double bond cannot be introduced at  $\Delta^9$  position
- D:-In humans double bond cannot be introduced at  $\Delta^{12}$  position

Correct Answer:- Option-D

Question50:-Regarding insulin which of the following statement is FALSE?

- A:-Inhibits hormone sensitive lipase
- B:-Inhibits acetyl Co A carboxylase
- C:-Activates glycerol phosphate acyl transferase
- D:-Activates pyruvate dehydrogenase

Correct Answer:- Option-B

Question51:-Which one of the following is NOT a cause of fatty liver?

- A:-Protein deficiency
- B:-Orotic acid deficiency
- C:-Pantothenic acid deficiency
- D:-Linoleic acid deficiency

Correct Answer:- Option-B

Question52:-Niemann-Pick disease is due to the deficiency of

- A:-Hexosaminidase A
- B:-Hexosaminidase A and B
- C:-Beta glucosidase
- D:-Sphingomyelinase

Correct Answer:- Option-D

Question53:-All the following statements are true regarding water EXCEPT

- A:-Water molecules form dipoles
- B:-The angle between two hydrogen atoms in water molecule is  $105^\circ$
- C:-Has low dielectric constant
- D:-Is an excellent nucleophile

Correct Answer:- Option-C

Question54:-Which of the following can be a cause of Normal Anion Gap Metabolic Acidosis?

- A:-Organic aciduria
- B:-Salicylate poisoning
- C:-Acetazolamide therapy
- D:-Lactic acidosis

Correct Answer:- Option-C

Question55:-All the following statements regarding pKa are true EXCEPT

- A:-At pKa the ratio of salt to acid in a buffer is 2:1
- B:-At pKa the buffer has maximum buffering capacity
- C:-pKa of an acid is the pH at which the acid is half ionized
- D:-Weak acids have high pKa

Correct Answer:- Option-A

Question56:-Which one of the following test is used to detect CSF globulins?

- A:-Heller's test
- B:-Pandy's test
- C:-Oliver's test
- D:-Pettenkoffer's test

Correct Answer:- Option-B

Question57:-Of the following which hypotheses claims that there is an association between the predictor and outcome variables?

- A:-Alternative hypotheses
- B:-Null hypotheses
- C:-Statistical hypotheses
- D:-Composite hypotheses

Correct Answer:- Option-A

Question58:-If mean is 25 and standard deviation is 5, then coefficient of variation is

- A:-5%
- B:-20%
- C:-25%
- D:-75%

Correct Answer:- Option-B

Question59:-Which of the following is the best test based on the ROC curve?

- A:-Area under the curve is more than 0.9
- B:-Area under the curve is 0.5
- C:-Area under the curve is less than 0.1
- D:-Area under the curve is less than 0.01

Correct Answer:- Option-A

Question60:-Which one of the following statements is NOT TRUE regarding telomerase?

- A:-It's activity is increased in cancer
- B:-Loss of telomerase activity leads to aging
- C:-It is a ribozyme
- D:-It has reverse transcriptase activity

Correct Answer:- Option-C

Question61:-Which one of the following diseases results from defective nucleotide excision repair mechanism?

- A:-Xeroderma Pigmentosum
- B:-Hereditary Polyposis Colon Cancer
- C:-Fanconi's Anemia
- D:-Bloom's Syndrome

Correct Answer:- Option-A

Question62:-Which one of the following is NOT true regarding IgM?

- A:-Do not fix complement
- B:-Antigen receptor is on the surface of B cells
- C:-Do not cross the placenta
- D:-Involved in primary response

Correct Answer:- Option-A

Question63:-Which amino acid is relatively absent in alpha helices?

- A:-Glycine
- B:-Valine
- C:-Tryptophan
- D:-Arginine

Correct Answer:- Option-A

Question64:-Which one of the following diseases is due to defective collagen synthesis?

- A:-Leukocyte adhesion deficiency II
- B:-Ehlers-Danlos syndrome
- C:-Paroxysmal nocturnal hemoglobinuria
- D:-I-cell disease

Correct Answer:- Option-B

Question65:-Which of the following vitamins provide the cofactor for transketolase reaction?

- A:-Vitamin "B<sub>6</sub>"
- B:-Niacin
- C:-Thiamine
- D:-Riboflavin

Correct Answer:- Option-C

Question66:-Which one of the following histone amino acid is typically acetylated?

- A:-Lysine
- B:-Arginine
- C:-Histidine
- D:-Leucine

Correct Answer:- Option-A

Question67:-Vitamin C is not synthesized in humans due to the deficiency of \_\_\_\_\_.

- A:-L-Xylulose dehydrogenase
- B:-L-Gulonolactone oxidase
- C:-L-Gulonate oxidase

D:-D-Glucuronate reductase

Correct Answer:- Option-B

Question68:-In the human body isoniazid is detoxified by \_\_\_\_\_.

A:-Acetylation

B:-Methylation

C:-Conjugation with sulphate

D:-Conjugation with glycine

Correct Answer:- Option-A

Question69:-During protein synthesis which amino acid is incorporated first in eukaryotes?

A:-N-formyl methionine

B:-Methionine

C:-Phenyl alanine

D:-Glutamine

Correct Answer:- Option-B

Question70:-Tetany is found in all the following conditions EXCEPT

A:-Hypoparathyroidism

B:-Renal insufficiency

C:-Vitamin D deficiency

D:-Metabolic alkalosis

Correct Answer:- Question Cancelled

Question71:-The reference interval for plasma osmolality is

A:-150 to 175 mOsmol/Kg

B:-300 to 325 mOsmol/L

C:-275 to 300 mOsmol/Kg

D:-350 to 375 mOsmol/L

Correct Answer:- Option-C

Question72:-Which one of the following is a marker of bone resorption?

A:-Procollagen type I N-terminal propeptide

B:-C-telopeptide

C:-Osteocalcin

D:-Bone alkaline phosphatase

Correct Answer:- Option-B

Question73:-Specific dynamic action for protein is

A:-5%

B:-15%

C:-30%

D:-55%

Correct Answer:- Option-C

Question74:-Which of the following is NOT a constituent of human glycoproteins?

A:-Glucose

B:-Fucose

C:-Xylose

D:-Sucrose

Correct Answer:- Option-D

Question75:-In which of the following condition CSF glucose is normal?

A:-Bacterial meningitis

B:-Tuberculous meningitis

C:-Viral meningitis

D:-Brain tumor

Correct Answer:- Option-C

Question76:-Which one of the following statements is FALSE regarding nitric oxide?

A:-Asparagine is the precursor of nitric oxide

B:-Is a potent vasodilator

C:-Depresses platelet function

D:-Results in refractory hypotension in septicemia

Correct Answer:- Option-A

Question77:-Westgard multirule  $4_{1s}$  is sensitive to which type of analytical error?

A:-Systematic error

B:-Imprecision error



- C:-Random error
- D:-Standardization error
- Correct Answer:- Option-A

Question78:-Which is the optical technique that measures the emitted light by a species that has absorbed exciting radiation from an outside source?

- A:-Spectrophotometry
- B:-Reflectance photometry
- C:-Fluorometry
- D:-Nephelometry

Correct Answer:- Option-C

Question79:-In which condition is a decrease in serum albumin and an increase in alpha2-macroglobulin seen?

- A:-Cirrhosis
- B:-Inflammation
- C:-Multiple myeloma
- D:-Nephrotic syndrome

Correct Answer:- Option-D

Question80:-The most common biological recognition element used in a biosensor is

- A:-Antigen
- B:-Antibody
- C:-Enzyme
- D:-Hormone

Correct Answer:- Option-C

Question81:-Which of the following is the marker enzyme of microsomes?

- A:-Cathepsin
- B:-Galactosyl transferase
- C:-Catalase
- D:-Glucose-6-phosphatase

Correct Answer:- Option-D

Question82:-Hill equation explains

- A:-Bi-bi reaction of enzymes
- B:-Co-operative binding of enzymes
- C:-Ping-pong mechanism of enzymes
- D:-Suicidal inhibition of enzymes

Correct Answer:- Option-B

Question83:-Select the glycosaminoglycan which does not contain uronic acid.

- A:-Keratan sulfate
- B:-Chondroitin sulfate
- C:-Dermatan sulfate
- D:-Hyaluronic acid

Correct Answer:- Option-A

Question84:-Which of the following is NOT true regarding 2,3-BPG?

- A:-Stabilizes the T structure of hemoglobin
- B:-`"CO\_2"` increases the synthesis of 2,3-BPG
- C:-2,3-BPG binds strongly to HbF than HbA
- D:-At high altitude the synthesis of 2,3-BPG is increased

Correct Answer:- Option-C

Question85:-Which of the following test is NOT used for the diagnosis of secondary adrenal insufficiency?

- A:-Dexamethasone suppression test
- B:-Cosyntropin test
- C:-Overnight metyrapone test
- D:-Insulin tolerance test

Correct Answer:- Option-A

Question86:-All the following hormones bind to cell surface receptors EXCEPT

- A:-Insulin
- B:-Substance P
- C:-Thyroid hormone
- D:-Glucagon

Correct Answer:- Option-C

Question87:-Which of the following hormone is NOT stored in the cells?

- A:-Parathormone
- B:-Aldosterone
- C:-Insulin
- D:-Adrenalin

Correct Answer:- Option-B

Question88:-Select the enzyme that is deficient in classical homocystinuria.

- A:-Adenosine homocysteinase
- B:-Homocysteine methyl transferase
- C:-Cystathionine beta synthase
- D:-Cystathionase

Correct Answer:- Option-C

Question89:-Which one of the following hormone is appetite suppressant?

- A:-Leptin
- B:-Ghrelin
- C:-Glucagon
- D:-Rennin

Correct Answer:- Option-A

Question90:-Which of the following is NOT a high energy compound?

- A:-Creatine phosphate
- B:-1,3-bisphosphoglycerate
- C:-Glucose-6-phosphate
- D:-Carbamoyl phosphate

Correct Answer:- Option-C

Question91:-Which of the following is an excellent GFR marker?

- A:-Creatinine clearance
- B:-Cystatin C
- C:-Tamm Horsfall glycoprotein
- D:-Inulin clearance

Correct Answer:- Option-D

Question92:-Which one of the following enzyme catalyzes a substrate level phosphorylation reaction?

- A:-Phosphofructokinase
- B:-Glucokinase
- C:-Succinate thiokinase
- D:-Succinate dehydrogenase

Correct Answer:- Option-C

Question93:-Which one of the following is a selenium containing enzyme?

- A:-5' deiodinase
- B:-Thyropoxidase
- C:-Xanthine oxidase
- D:-Glutamate dehydrogenase

Correct Answer:- Option-A

Question94:-Select the enzyme that is deficient in Lesch-Nyhan syndrome

- A:-Phosphoribosyl amidotransferase
- B:-Hypoxanthine guanine phosphoribosyl transferase
- C:-Adenine phosphoribosyl transferase
- D:-Phosphoribosyl pyrophosphate synthase

Correct Answer:- Option-B

Question95:-Cataract in galactosemia is due to accumulation of

- A:-Dulcitol in lens
- B:-Sorbitol in lens
- C:-Mannitol in lens
- D:-Iduronic acid in lens

Correct Answer:- Option-A

Question96:-Which one of the following apoproteins is present in LDL?

- A:-Apo B-48
- B:-Apo B-100
- C:-Apo E
- D:-Apo C

Correct Answer:- Option-B

Question97:-Which one of the following statements is FALSE regarding tRNA?

- A:-Amino acid is attached to the 5' CCA sequence
- B:-DHU arm serves as the recognition site for the enzyme which adds the amino acid
- C:-Anticodon arm recognizes the triplet nucleotide codon present in m RNA
- D:-It contains the unusual amino acid hypoxanthine

Correct Answer:-**Question Cancelled**

Question98:-All the following are autosomal recessive diseases EXCEPT

- A:-Albinism
- B:-Sickle cell anemia
- C:-Chondrodystrophy
- D:-Phenyl ketonuria

Correct Answer:- Option-C

Question99:-Which one of the following is NOT a substrate for gluconeogenesis?

- A:-Glycerol
- B:-Propionyl CoA
- C:-Even chain fatty acids
- D:-Lactate

Correct Answer:- Option-C

Question100:-All the following are features of kwashiorkor EXCEPT

- A:-Lethargic and apathetic
- B:-Presence of anorexia
- C:-Crazy pavement dermatitis
- D:-Serum albumin 2 to 3 g/dl

Correct Answer:- Option-D