AMB

PROVISIONAL ANSWER KEY (CBRT)

Name of The Post	**Professor, Biochemistry, General State Service, Class-1**
Advertisement No	**39/2019-20**
Preliminary Test Held On	**16/02/2020**
Que. No.	**001-200 (Concerned Subject Only)**
Publish Date	**17-02-2020**
Last Date to Send Suggestion (S)	**26-02-2020**

Instructions / સૂચના

Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -

(1) All the suggestion should be submitted Physically in prescribed format of suggestion sheet.

(2) Question wise suggestion to be submitted in the prescribed format of Suggestion Sheet published on the website.

(3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key, published herewith on the website. Objections should be sent referring to the Question, Question No. & options of the Master Question Paper.

(4) Suggestions regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.

(5) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet /response sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted suggestions are differed. For the purpose, the candidate shall attach a copy of his answersheet/ Response sheet along with his application(s).

(6) Objection for each question shall be made on separate Suggestion sheet. Objection for more than one question in single Suggestion sheet shall not be considered & treated as cancelled.

ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં

(1) ઉમેદવારે વાંધા-સૂચનો નિયત કરવામાં આવેલ વાંધા-સૂચન પત્રકથી રજૂ કરવાના રહેશે.

(2) ઉમેદવારે પ્રશ્નપ્રમાણે વાંધા-સૂચનો રજૂ કરવા વેબસાઈટ પર પ્રસિધ્ધ થયેલ નિયત વાંધા-સૂચન પત્રકના નમૂનાનો જ ઉપયોગ કરવો.

(3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતા તમામ વાંધા-સૂચનો વેબસાઈટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.

(4) માસ્ટર પ્રશ્નપત્ર માં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચન ધ્યાને લેવામાં આવશે નહીં.

(5) ઉમેદવારે જે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાબ અને ઉત્તરવહીનો જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા-સૂચન ધ્યાનમાં લેવાશે નહીં. આ હેતુ માટે, ઉમેદવારે પોતાની અરજી(ઓ) સાથે પોતાની જવાબવહીની એક નકલનું બિડાણ કરવાનું રહેશે.

(6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચન પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

001. Which of the following is not channel former ?
(A) Glutamate (B) Valinomycin
(C) Amelogenin (D) Gramicidin

002. Protein required for micro table synthesis is
(A) Actin (B) Myosin
(C) Tubulin (D) Lymphocyte

003. Transport of glucose in erythrocyte by
(A) Simple diffusion (B) Active transport
(C) Facilitated diffusion (D) Ion driven active transport

004. Uronic acid is absent in
(A) Keratan Sulphate (B) Hyaluronic Acid
(C) Chondroitin Sulphate (D) Dermatan Sulphate

005. Number of peptide bonds present in glutathione
(A) 1 (B) 2
(C) 3 (D) 4

006. Enzymes are activated by phosphorylation of which amino residue ?
(A) Glutamic acid (B) Alanine
(C) Serine (D) Arginine

007. Chloride ion is required for activation of enzyme
(A) Lipase (B) Amylase
(C) Elastin (D) Tyrosinase

008. NAG is allosteric inhibitor for the enzyme
(A) Carbamoyl phosphate synthase I (B) ALA Synthase
(C) Citrate synthase (D) Pyruvate carboxylase

009. The aspartic protease family enzyme not produced by HIV is
(A) Pepsin (B) Lysosomal cathepsins
(C) Protease (D) Lipase

010. Enzyme used to treat the fabry disease is
(A) β - glucosidase (B) α - glucosidase
(C) α - galactosidase (D) β - glucuronidase

011. Cyanide is what type of enzyme inhibitor ?
(A) Apoenzyme inhibitor (B) Coenzyme inhibitor
(C) Prosthetic group inhibitor (D) Specific ion cofactor inhibitor

012. The competitive inhibitor for enzyme vitamin 'K' epoxide reductase is
(A) Dicumarol (B) Pravastatin
(C) Allopurinol (D) Succinyl choline

013. The natural antibacterial agent found in tears is
(A) Lipase (B) Lysozyme
(C) Pepsin (D) Tripsin

014. The non-amphipathic molecule is
(A) Cholesterol ester (B) Sodium glycocholate
(C) Phosphatidylserine (D) Potassium taurocholate

015. Deficiency of which clotting factor cause Haemophilia A ?
(A) X
(B) VIII
(C) II
(D) V

016. The insulin sensitive tissue is
(A) Brain
(B) Adipose tissue
(C) Liver
(D) Cardiac Muscle

017. Malate shuttle is necessary for
(A) Glycogenolysis
(B) Providing NADPH
(C) ATP Generation
(D) Gluconeogenesis

018. Which of the following is enzyme is inactivated by Phosphorylation ?
(A) Glycogen phosphorylase
(B) Fructose - 2, 6 - bisphosphatase
(C) Pyruvate kinase
(D) Acetyl CoA - carboxylase

019. The coenzyme required for HMP shunt pathway is
(A) PLP
(B) TPP
(C) Biotin
(D) FAD

020. Which molecule is not converted back to glucose ?
(A) Lactate
(B) Alanine
(C) Acetyl Co-A
(D) Propionyl - Co-A

021. The hormone which not stimulates hepatic glycogenolysis ?
(A) Glucagon
(B) Cortisol
(C) Adrenaline
(D) Thyroxine

022. G6PD deficiency causes
(A) Catract
(B) Hypoglycemia
(C) Hemolytic anemia
(D) Galactosemia

023. Insulin is which type of hormone
(A) Steroid hormone
(B) Glycolipid hormone
(C) Peptide hormone
(D) Mucopolysaccharide hormone

024. C-peptide levels are indicative of
(A) Endogenous insulin synthesis
(B) Processing of exogenous insulin
(C) Binding of Insulin by insulin receptors
(D) Insulin synthesis inhibition

025. Chyluria is passage between
(A) Blood vessel and urinary tract
(B) Liver and lungs
(C) Lungs and Stomach
(D) Lymphatic Vessel and urinary tract

026. The coenzyme which is not part of PDH complex
(A) NAD
(B) FAD
(C) TPP
(D) THF

027. The major chunk of blood glucose at rest is consumed by
(A) Skeletal muscle
(B) Liver
(C) Brain
(D) Adipose tissue

028. Which have the lowest glycemic index ?
(A) A baked apple
(B) An uncooked apple
(C) An uncooked potato
(D) A baked potato

029. A blood sample is taken from a 40 years old man has been fasting completely for a week drinking only water. Which of the following will be at higher concentration than after normal overnight fast ?

(A) Glucose
(B) Triacylglycerol
(C) Insulin
(D) Ketone bodies

030. Which one of the following statement is correct ?

(A) Glucose-1- phosphate may be hydrolysed to yield free glucose in liver.
(B) Glucose-6- phosphate can be formed from glucose but not from glycogen.
(C) In liver and red blood cells glucose-6 - phosphate may enter into either glycolysis.
(D) Glucose-6 - phosphate cannot be converted to glucose-1 - phosphate in liver.

031. In glycolysis the conversion of 1 mol of fructose 1,6 - bisphosphate to 2 mol of pyruvate results in the formation of :

(A) 2 mol NADH and 4 mol of ATP
(B) 1 mol of NAD^+ and 2 mol of ATP
(C) 2 mol of NAD^+ and 4 mol of ATP
(D) 2 mol NADH and 2 mol ATP

032. The protein initiates glycogen synthesis is

(A) Glycogenin
(B) Albumin
(C) Thermogenin
(D) Glucogenin

033. Wernicke - Korsakoff's syndrome occur due to deficiency of

(A) G6 PD
(B) Transketolase
(C) Glutathione peroxidase
(D) Transaminase

034. Which enzyme defect cause galactosemia

(A) Galactokinase
(B) Galactose - 1 - phosphate uridyl trasferase
(C) Hexokinase
(D) Glucokinase

035. Her's disease is due to defect in enzyme

(A) Muscle glycogen phosphorylase
(B) Liver glycogen phosphorylase
(C) Glucosyl α-1,6, glucosidase
(D) Phosphofructokinase

036. Defect in which enzyme cause Hunter's disease

(A) α - Iduronidase
(B) Iduronate sulfatase
(C) β - Galactosidase
(D) Galactose 6 - Sulfatase

037. In arsenic poisoning Arsenite bind which group of Lipoic acid to inhibit PDH?

(A) – SH
(B) – CHO
(C) – COO
(D) – CH_2

038. Which enzyme is known as moonlighting enzyme

(A) Fumarase
(B) Aconitase
(C) Citrate Synthase
(D) Succinate thiokinase

039. Which is positive regulator of phosphofructokinase ?

(A) AMP
(B) ADP
(C) ATP
(D) GTP

040. Mc Ardle's disease is due to deficiency of

(A) Muscle phosphorylase
(B) Phosphorylase
(C) Glycogen Synthase
(D) Glycosidase

041. Which lipase acts in capillary walls ?

(A) Pancreatic lipase (B) Intestinal lipase

(C) Lipoprotein lipase (D) Hormone Sensitive lipase

042. Lipstatin inhibit which enzyme by irreversible inhibition ?

(A) Lingual lipase (B) Pancreatic lipase

(C) Intestinal lipase (D) Lipoprotein lipase

043. The defect in ABCG 5 and ABCG 8 cause disease called

(A) Phytosterolemia (B) Hypercholesterolemia

(C) Hyper-protenemia (D) Hyperphosphotemia

044. Levels of lipoprotein increase in diabetic nephropathy is

(A) HDL-C (B) LP(a)

(C) IDL (D) LDL-C

045. Apo AI activates LCAT with the help of which protein

(A) ABCA1 (B) ABCG1

(C) ABCA2 (D) ABCG2

046. Refsum's disease is cause due to deficiency of enzyme

(A) Mutase (B) Propionyl CoA carboxylase

(C) Phytanol hydroxylase (D) Acyl CoA dehydrogenase

047. Which drug dissolve gall stone

(A) Chenodeoxycholic acid (B) Cholic acid

(C) Glycocholic acid (D) Taurocholic acid

048. Allosteric activator of acetyl CoA carboxylase is

(A) Palmitoyl CoA (B) Malate

(C) Citrate (D) Malonyl CoA

049. Action site of phospholipase A2 is

(A) Small intestine (B) Capillary walls

(C) Adipocyte (D) Stomach

050. Bicarbonate moves out of RBC in peripheral tissues in exchange for

(A) Cl^- (B) Na^+

(C) SO_4^{2-} (D) HPO_4^{2-}

051. Which of the following inhibit LCAT activity ?

(A) Apo A-I (B) Apo A-II

(C) Apo C-I (D) Apo E

052. Which enzyme is known as (PAF-AH) platelet activating factor acetylhydrolase ?

(A) Lipoprotein - associated phospholipase A2

(B) Lipoprotein lipase

(C) Lecithin cholesterol acyl transferase

(D) Pancreatic lipase

053. The characteristic finding in hypobetalipoproteinemia is

(A) Orange tonsils (B) Corneal arcus

(C) Acanthocytosis (D) Eruptive Xanthomas

054. Plasma HDL deficiency occurs in which of the following disease ?

(A) Tangier's disease **(B) Refsum's disease**

(C) Hartnup disease **(D) Diabetes mellitus**

055. Deficiency of which enzyme causes Gaucher's disease

(A) Beta glucosidase **(B) Beta galactosidase**

(C) Alpha - galactosidase **(D) Sphingomyelinase**

056. The major phospholipid found in mitochandrial membrane is

(A) Cephalin **(B) Cardiolipin**

(C) Lysophospholipid **(D) Lysolecithin**

057. Ketone bodies are formed in hepatic

(A) Mitochondria **(B) Cytoplasm**

(C) Lysosome **(D) Golgi Complex**

058. Which of the following lipogenic enzyme is activated by citrate ?

(A) Pyruvate dehydrogenase **(B) Acetyl - CoA carboxylase**

(C) 3-ketoacyl-CoA synthase **(D) 3-ketoacyl reductase**

059. All sphingolipids are formed from

(A) Lysolicithin **(B) Cardiolipin**

(C) Ceramide **(D) Triacylglycerol**

060. The chain breaking antioxidant is

(A) Glutathione peroxidase **(B) Selenium**

(C) EDTA **(D) Catalase**

061. Amino acid which in major contributor to transport of nitrogen destined for excretion as urea ?

(A) Alanine **(B) Glutathione**

(C) Lysine **(D) Glycine**

062. Abetalipoproteinemia is caused due to block in the synthesis of

(A) Apo-A **(B) Apo-B**

(C) Apo-C **(D) A-II**

063. APOH is associated with lipoprotein

(A) VLDL **(B) HDL**

(C) LDL **(D) Chylomicron**

064. Liver X receptor α (LXR α) is not expressed primarily in

(A) Liver **(B) Brain**

(C) Adipose tissue **(D) Macrophages**

065. Sarcosin is formed from

(A) Demethyl Serine **(B) Dimethyl Glycine**

(C) Dimethyl Methionine **(D) β-Alanyl dipeptides**

066. Varigate porphyria is due to defect in enzyme

(A) ALA-dehydratase **(B) Ferrochelatase**

(C) Protoporphyrinogen oxidase **(D) Coproporphyrinogen oxidase**

067. Glibert syndrome occur due to defect in

(A) Bilirubin UDP-glucuronyl transferase **(B) Hepatic UDP glucuronosyl transferase**

(C) Aspartate transaminase **(D) Alanine transaminase**

068. Select the one of the following statements that is not correct :

(A) Bilirubin is cyclic tetrapyrrole

(B) Albumin bound bilirubin is transported to the liver

(C) Bilirubin contents methyl and vinyl groups

(D) Bilirubin does not contain iron

069. Citrullinemia occur due to defective enzyme

(A) Arginase

(B) Ornithintrans carbamylase

(C) Arginosuccinate synthetase

(D) Arginosuccinase

070. Which syndrome occur due to mutation of $ORNT_1$ gene that encodes the mitochondrial membrane ornithine permease ?

(A) HHH syndrome

(B) M-Syndrome

(C) ABCD Syndrome

(D) Hurler Syndrome

071. Which of the following disease cause when defective carrier that transports cysteine across the lysosomal membrane from lysosomal vesicles to the cytosol ?

(A) Homocystinuria

(B) Cystinuria

(C) Cystinosis

(D) Homocystinuria Type-II

072. The amino acid not undergo trans-amination reaction is

(A) Alanine

(B) Aspartic acid

(C) Glutamic acid

(D) Lysine

073. Choline is synthesized from which amino acid ?

(A) Glycine

(B) Methionine

(C) Cysteine

(D) Senine

074. Pheochromocytoma is produces due to excessive formation of

(A) Melanin

(B) Tryptophan

(C) Catecholamines

(D) Serotonin

075. Hb saturation with oxygen is mostly dependent on

(A) PCO_2

(B) PO_2

(C) HCO_3^-

(D) Carbamino Hb

076. Biologically important compound formed from lysine is

(A) Creatine

(B) Glutathione

(C) Carnitine

(D) Serotonin

077. The following substance is not a catecholamine

(A) Dopamine

(B) Epinephrine

(C) Ethanolamine

(D) Norepinephrine

078. Argentaffinomas are usually seen in the

(A) GI tract

(B) Heart

(C) Lungs

(D) Brain

079. Which one of the following disorder is characterised by self-injurious behaviour ?

(A) Severe combined immuno deficiency

(B) Lesch-Nyhan syndrome

(C) Gouty arthritis

(D) Psoriasis

080. Which one of the following pathway is metabolic integration pathway ?
(A) HMP shunt
(B) Beta oxidation
(C) Glycolysis
(D) Kreb's cycle

081. In lead poisoning, which one of the following is seen in urine ?
(A) δ-ALA
(B) Uroporphyrin
(C) Coproporphyrin
(D) Protoporphyrin

082. Orotic aciduria is a hereditary disorder due to defect in the enzyme
(A) UDP-synthase
(B) UMP synthase
(C) Thymidylate synthase
(D) Dihydrofolate reductase

083. By which reaction UTP is converted to CTP ?
(A) Methylation
(B) Amination
(C) Isomerization
(D) Reduction

084. The limiting amino acid in pulses is
(A) Leucine
(B) Lysine
(C) Tryptophan
(D) Methionine

085. In which aminoaciduria Benedict's test is positive ?
(A) Phenylketonuria
(B) Histidinemia
(C) Alkaptonuria
(D) Nonketotic hyperglycinemia

086. Which one of the following test is noninvasive ?
(A) Cordocentesis
(B) Amniocentesis
(C) Double marker test
(D) Chronic villus sampling

087. Which one of the following is not NAD^+ linked enzyme ?
(A) ICDH
(B) MDH
(C) PDH
(D) Succinate dehydrogenase

088. Which one of the following is not mono-oxygenases enzyme ?
(A) Phenyl hydroxylase
(B) Tyrosine hydroxylase
(C) Cytochrome P-450 mono-oxygenase
(D) Homogentisic acid oxidase

089. The enzyme present in between outer and inner membrane of mitochondria is
(A) Creatine kinase
(B) Mono amino oxidase
(C) Acetyl-CoA synthase
(D) Succinate dehydrogenase

090. Which one of the following is not an uncoupler for oxidative phosphorylation ?
(A) 2,4-DNP
(B) 2,4-DNC
(C) CCCP
(D) CN^-

091. In ETC cytochrome oxidase is inhibited by
(A) Cyanide
(B) Cassava
(C) Doxorubicin
(D) Azide

092. Valinomycin inhibits oxidative phosphorylation because
(A) It inhibits ATP synthase
(B) It forms a complex with oxidase
(C) It inhibits cytochrome oxidase
(D) It makes mitochondria permeable to potassium

093. The high energy phosphate with highest free energy of hydrolysis is
(A) ATP (B) GTP
(C) Succinyl-CoA (D) PEP

094. Gastric acid secretion is not stimulated by
(A) Hyperglycemia (B) Gastrin
(C) Histamine (D) Vagus

095. U1 is small-stable RNA found in mammalian cells at
(A) Nucleous (B) Cytoplasm
(C) Nucleoplasm (D) Prichromatin granules

096. Recently discovered RNA which do not code for protein is
(A) LncRNA (B) sRNA
(C) rRNA (D) SnRNA

097. Acetylation of histones H_3 and H_4 is associated with
(A) Condensation of chromosome during the replication cycle.
(B) Chromosomal assembly during DNA replication.
(C) The activation or inactivation of gene transcription
(D) DNA repair

098. In human DNA, How much percent of the genome consists of repetitive sequences ?
(A) 45 (B) 50
(C) 40 (D) 30

099. Which protein involved in replication have initiates synthesis of RNA primers ?
(A) DNA polymerases (B) Helicases
(C) DNA primase (D) DNA ligase

100. Which one of the following is cyclin dependent kinases involved in cell-cycle progression ?
(A) CDK-2 (B) CPK-1
(C) Glucokinase (D) CPK-2

101. Two-base type of DNA damage is due to
(A) Depurination (B) Alkylation of base
(C) Deamination of cystosine to uracil (D) UV light-induced thymine-thymine dimor

102. Which is the correct consensus sequence of Ig octamer element?
(A) TATAAA (B) CCAATC
(C) ATGCAAAT (D) GATGCCCATA

103. Name the RNAs derived from large primary transcripts through specific nucleolytic processing
(A) Micro-RNAs (B) Sr RNAs
(C) rRNAs (D) tRNAs

104. Which of the following molecule acts as a catalysts?
(A) RNA (B) DNA
(C) ATP (D) GTP

105. rRNA is a
(A) methyl transferase (B) amino transferases
(C) thymidylate transferases (D) peptidyl transferase

106. The smallest unit of genetic expression is

(A) Operon (B) Cistron

(C) Victor (D) Plasmid

107. Which one of the following specific sequence clearage sites for endonuclease ECORI

(A) G↓AATTC / CTTAA↑C (B) C↓CTGG / GGAC↑C

(C) A↓AGCTT / TTCGA↑A (D) G↓CGC / CGC↑G

108. The enzyme λ exonuclease used in recombinant DNA research for the reaction to

(A) Removes nucleotides from 3' ends of DNA

(B) Removes nucleotides from 5' ends of DNA

(C) Degrades single – stranded DNA

(D) Adds nucleotides to the 3' ends of DNA

109. The structural alterations of the β – Globin gene in β – Thalassemia type III is

(A) Point mulations (B) Deletion

(C) Rearrangement (D) Frameshit mulations

110. What is the approximate number of base pairs associated with a single nucleosome?

(A) 292 (B) 146

(C) 900 (D) 73

111. What disease is often associated with a breakdown of a cell's ability to regulate its own division?

(A) Heart disease (B) Emphysema

(C) Cancer (D) Kidney disease

112. What class of DNA are the eukaryotic rDNA cistrons?

(A) Mixed sequence DNA (B) Moderately repetitive DNA

(C) Single copy DNA (D) High repetitive DNA

113. The sequence CCA is present on the

(A) 5' end of all functional tRNAs (B) 3' end of all functional tRNAs

(C) 3' end of all non-functional tRNAs (D) 5' end of all non-functional tRNAs

114. Which of the following histone amino acids are typically acetylated?

(A) Arginine (B) Lysine

(C) Histidine (D) Leucine

115. Name the disease in which mutations in genes encoding ion channels in the heart.

(A) I-cell disease (B) Congenital long QT syndrome

(C) Achondroplasia (D) Wilson disease

116. The hormone not bind to intracellular receptors is

(A) Esterogens (B) Calcitriol

(C) Progestins (D) Calcitonin

117. Name the hormone which inhibit adenylyl cyclase activity

(A) ACTH (B) Glucagon

(C) Calcitonin (D) Acetylcholine

118. What class of G-proteins stimulates thrombin via Rho effector?

(A) α 5 (B) α 11

(C) α 12 (D) α 0

119. The enzyme not regulated by calcium or calmodulin is

(A) Adenylyl cyclase (B) Nitric oxide synthase

(C) Phosphorylase kinase (D) Glucokinase

120. Non natural ligand that binds to G-protein – coupled receptors is

(A) Steroid hormones (B) Chemottractants

(C) Opium derivatives (D) Neurotransmitters

121. Name the coenzyme for carboxylation of glutamate in postsynthetic modification of calcium – Binding proteins

(A) Vitamin C (B) Vitamin K

(C) Vitamin B1 (D) Vitamin B6

122. Which one of the following vitamin is synthesized in the body from tryptophan?

(A) Pyridoxal phosphate (B) Riboflavin

(C) Niacin (D) Vitamin C

123. Which one of the following is important in cell signalling and apoptosis of cell that have suffered DNA damage?

(A) Nitric oxide (B) Ascorbate

(C) β - Carotene (D) Catalase

124. The sugar found in the core trisaccharide of proteoglycans is

(A) N-Acetylneuraminic acid (B) N-Acetylgalactosamine

(C) N-Acetylglucosamine (D) Galactose

125. The Glycoprotein derived form seeds of the castor plant is

(A) Bactterial toxins (B) Ricin

(C) C-type lectins (D) S-type lectins

126. Which one of the following is not glycophosphatidylinositol linked protein?

(A) Acetylcholinesterase (B) Alkaline phosphatase

(C) 5' Nucleotidase (D) Glucose 6 phosphatase

127. Which one of the following types of oxygen radical damage may lead to the development of hereditary mutations?

(A) Chemical modification of DNA based in somatic cells

(B) Oxidation of amino acids in cell membrane protein

(C) Oxidation of amino acids in mitochondrial proteins

(D) Chemical modification of DNA in germ-line cells

128. Lipid component of the cytochrome P450 system is

(A) Phosphatidylcholine (B) Phosphatidylinositol

(C) Phosphatidylserine (D) Phosphatidylethanolamine

129. Which of the following would be used to take a blood sample for blood gas analysis?

(A) A tube containing citrate (B) A tube containing EDTA

(C) An evacuated tube to exclude oxygen (D) A tube containing oxalate

130. Which one of the following disorder is not due to peroxisomal abnormality?

(A) Acatalasemia
(B) Infantile Refsum disease
(C) Hyperoxaluria type 1
(D) Hyperammonemia

131. Cystic fibrosis is caused by abnormalities in intracellular transport of specific proteins due to mutations, name of the affected protein is

(A) CFTR
(B) α 1 - Antitrypsin
(C) HFE
(D) Insulin receptor

132. The most correct function of COPI is

(A) Involved in export from the ER to either ERGIC or the GA
(B) Involved in the intra – GA transport and retrograde transport form GA to the ER
(C) Involved in transport in post GA locations including the PM, TGN and endosomes
(D) Involved in regulated secretion from organs such as the pancreas

133. Severe chondrodysplasia osteoarthritis is disease caused due to mutations in which gene?

(A) COL1A1
(B) COL2A1
(C) COL3A1
(D) COL5A1

134. Morquio syndrome B is due to deficiency of enzyme

(A) α-L-Iduronidase
(B) Hyaluronidase
(C) β-glucoronidase
(D) β-galactosidase

135. Which one of the following is not muscle protein

(A) Titin
(B) Nebulin
(C) Desmin
(D) Keratin

136. Which one of the following disorder is related to Ca^{2+} release channel

(A) Central core disease
(B) Hyperkalemic periodic paralysis
(C) Myotonia congenita
(D) Dwarfism

137. Which one of the following protein is not present in RBC membrane?

(A) Spectrin
(B) Ankyrin
(C) Actin
(D) Desmin

138. Chemokines are stabilized by one of the following bonds

(A) Disulfide bonds
(B) Dipeptide bonds
(C) C-C bonds
(D) Glycosidic linkages

139. Which one of the following types of protein does not act as a GT pase?

(A) ADP ribosylation factor
(B) Ran proteins
(C) Rab proteins
(D) N-ethylmaleimide-sensitive factor

140. Which RNA genome virus cause hepatocellular carcinoma?

(A) Hepatitis-B
(B) Hepatitis-C
(C) Epstein-barr virus
(D) Human herpes virus type-1

141. Which one of the following gene is not associated with colorectal carcinogenesis?

(A) APC
(B) TGF
(C) BRAF
(D) Abl

142. Which one of the following is not a component of the cell's suit of damage repair and prevention agent?

(A) Superoxide dismutase (B) Glutathione

(C) Catalase (D) Caspase 7

143. Which one of the following hormone has no effect on gastric acid

(A) Secretin (B) Gastrin

(C) Somatomedin (D) Cholecystokinin

144. Renal tubular function can be assessed by:

(A) Urea clearance

(B) Plasma urea

(C) Plasma electrolyte

(D) Specific gravity of early morning urine sample

145. Which carrier protein of plasma transports free heme

(A) Transferrin (B) Hemopexin

(C) Hepatoglobin (D) Pre-albumin

146. The blood clotting factor prothrombin is activated by

(A) Factor Xa (B) Factor XIa

(C) Factor IXa (D) Factor XIIa

147. Which one of the following is a negative acute phase reactant protein?

(A) Albumin (B) CRP

(C) Ceruloplasmin (D) Haptoglobin

148. Respiratory acidosis cannot result from

(A) Narcotic poisoning (B) Artificial ventilation

(C) Bronchial Asthma (D) Poliomyelitis

149. Which one of the following is not cause of hyponatremia?

(A) Vomiting (B) Burns

(C) Addison's disease (D) Cushing's disease

150. Which one of the following is not cause of hyperkalemia?

(A) Decreased renal excretion of potassium (B) Transmembrane shift

(C) Tissue hypoxia (D) Shift or redistribution of potassium

151. Which one of the following has no effect on ECT volume?

(A) ADH (B) Calcitriol

(C) Aldosterone (D) Renin

152. The cells which not produces free radicals are?

(A) Macrophages (B) Neutrophils

(C) Erythrocytes (D) Basophils

153. The enzymes involved in detoxification are

(A) Transaminases (B) Dehydrogenases

(C) Decarboxylases (D) Cytochrome P450 enzymes

154. All – trans retinoic acid is used as adjuvant in treatment of

(A) Promyelocytic leukemia (B) Xerophthalmia

(C) Keratomalacia (D) Hypervitaminosis A

155. The site for cholecalciferol synthesis is
(A) Skin
(B) Liver
(C) Kidney
(D) Internal mucosa

156. The high doses of niacin is useful to reduce the levels of
(A) lipoprotein (a) [LP(a)]
(B) HDL - C
(C) LDL - C
(D) Chylomicrons

157. The coenzyme form of vitamin B12 is
(A) Methylcobalamin
(B) Coenzyme A
(C) FAD
(D) ACP

158. Atrophic glossitis caused due to deficiency of which vitamin?
(A) Pyridoxine
(B) Biotin
(C) Niacin
(D) Riboflavin

159. Which one of the following is synthesized with the help of folic acid?
(A) ATP
(B) TTP
(C) GTP
(D) CTP

160. Which one of the following is identified as a tumor suppressor for gastric cancer
(A) Calpain 10
(B) Phytic acid
(C) Calpain 9
(D) Oxalates

161. Which one of the following protein contains iron?
(A) Superoxide dismutase
(B) Albumin
(C) Ceruloplasmin
(D) Xanthine oxidase

162. Phenylalanine is deficient in:
(A) Cereals
(B) Pulses
(C) Maize
(D) Tapioca

163. Which property of uric acid is responsible for the manifestation of gout?
(A) Keto – enol tautomerism
(B) Acidic Nature
(C) Reducing action
(D) Solubility constant

164. Which enzyme is not essential for DNA replication?
(A) DNA lipase
(B) Topoisomerase
(C) Reverse transcriptase
(D) Helicase

165. The coding unit of the DNA is called as:
(A) Cistron
(B) Intron
(C) Exon
(D) Prion

166. Which one of the following complex is involved in translation process?
(A) Nucleosome
(B) Lysosome
(C) Spliceosome
(D) Polysome

167. Which one of the following test is used to check the mutagenicity of a compound?
(A) Guthrie test
(B) Hay's test
(C) Fish test
(D) Ame's test

168. Which one of the following is not vectors for gene therapy?
(A) Liposomes
(B) Adenoviruses
(C) Retroviruses
(D) Proteasomes

169. Which PCR technique is used for Genexpert?
(A) Nested PCR
(B) RT-PCR
(C) Multiplex-PCR
(D) Real time PCR

170. DNA probes are radiolabelled by
(A) Southern blotting
(B) Nick translation
(C) In situ hybridization
(D) Restriction mapping

171. The result of thyroxine deficiency is
(A) Grave's disease
(B) Thyrotoxicosis
(C) Cushing's syndrome
(D) Myxedema

172. Enzyme active in HIV propagation is
(A) DNA dependent DNA polymerase
(B) DNA dependent RNA polymerase
(C) RNA dependent DNA polymerase
(D) RNA dependent RNA polymerase

173. Which one of the following does not activate oncogenes?
(A) Viral infection
(B) Promoter insertion
(C) Mutations in proto-oncogenes
(D) Reverse transcriptase

174. The functional unit of myofibril is
(A) Sarcomere
(B) Actin
(C) Myosin
(D) A band

175. Which one of the following has maximum absorption at 340 nm?
(A) Heme
(B) NADH
(C) Proteins
(D) Nucleic acid

176. Which one of the following radio isotope has minimum half-life?
(A) ^{131}I
(B) ^{125}I
(C) ^{51}Cr
(D) ^{99}Te

177. Selenium is constituent of which antioxidant enzyme?
(A) Catalase
(B) Superoxide dismutase
(C) Glutathione peroxidase
(D) Glutathione reductase

178. Which one of the following is not a type of DNA repair system
(A) Mismatch repair
(B) Base excision repair
(C) Nucleotide excision repair
(D) Indirect repair

179. Okazaki fragment contains about how many nucleotides?
(A) 1,00
(B) 10,000
(C) 1,000
(D) 10

180. RNA polymerase holoenzyme binds to lac operon at the following site:
(A) i gene
(B) z gene
(C) Operator locus
(D) Promotor region

181. Restriction endonucleases can recognize:
(A) Palindromic sequences
(B) Chimeric DNA
(C) DNA-RNA hybrids
(D) Homopolymer sequence

182. Which one of the following hormone have important role in regulation of body water?
(A) ACTH
(B) FSH
(C) Epinephrine
(D) Oxytocin

183. Which one of the following hormone produced by adrenal cortex?
(A) Aldosterone (B) Calcitonin
(C) Adrenaline (D) Einephrine

184. IgM present on the surface of B lymphocyte is:
(A) Monomer (B) Dimer
(C) Tetramer (D) Pentamer

185. Macrophages are derived from:
(A) Neutrophils (B) Lymphocytes
(C) Monocytes (D) Basophils

186. Which one of the following mineral not function as antioxidant?
(A) Iron (B) Copper
(C) Zinc (D) Manganese

187. Which one of the following motifs contains a large number of basic amino acids?
(A) Leucine zipper (B) Zinc finger
(C) helix - turn (D) Tryptophan

188. The first synthetic vaccine developed by rDNA technology is
(A) BCG vaccine (B) Hepatitis B vaccine
(C) Small pox vaccine (D) Measles vaccine

189. In which one of the following disorder there is deficiency of all antibodies?
(A) Chronic lymphocytic leukemia
(B) DiGeorge's syndrome
(C) Bruton's agammaglobulinemia
(D) Severe combined immunodeficiency disease

190. In α–Thalassemia number of defective genes are
(A) One (B) Two
(C) Three (D) Four

191. Congenital erythropoietic porphyria is due to deficiency of enzyme-
(A) ALA-Synthase - 2 (B) ALA-Synthase - 1
(C) Uroporphyrinogen – Synthase III (D) Hydroxymethylbilane Synthase

192. The disorder in which the patients have an irresistible urge to bite their fingers and lips is
(A) Gout (B) Severe combined immunodeficiency disease
(C) Reye's syndrome (D) Lesch – Nyhan syndrome

193. A common lesion found in DNA after exposure to UV light is due to
(A) Pyrimidine dimers (B) Base deletion
(C) Purine dimers (D) Frame shift mutations

194. Termination of RNA synthesis may be signated by a sequence that is recognized by:
(A) P factor (B) σ factor
(C) α factor (D) β factor

195. Which one of the following is not required for protein biosynthesis?
(A) Restriction endonucleases (B) Reverse transcriptase
(C) RNA polymerase (D) A non specific DNA sequence

196. Which one of the following acts through increased number of aquaporins on the membranes?

(A) Aldosterone
(B) Angiotensin II
(C) Vasopressin
(D) Atrial natriuretic peptide

197. Which one of the following liver enzyme is used for the diagnosis of obstructive jaundice?

(A) AST
(B) ALP
(C) ALT
(D) SHBG

198. The specific gravity of urine would decrease in case of

(A) Dehydration
(B) Glomerulonephritis
(C) SIADH
(D) Proteinuria

199. Which one of the following is most suitable for monitoring the patients on exogenous thyroxine?

(A) Total T_3 & T_4
(B) Thyrotropin
(C) Free T_3
(D) Thyroid-Binding Globulin

200. In which one of the following condition low levels of lipase could be observed?

(A) Renal insufficiency
(B) Salivary gland inflammation
(C) Diabetes mellitus
(D) Pancreatic malignancy