Paper Code - 3622

B.Sc. Semester-III (Microbiology)

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Microbial Physiology (Theory)

કુલ સમય :– ૬૦ મીનીટ કુલ પ્રશ્નો : ૫૦ વિદ્યાર્થીએ ટીક કરવાના પ્રશ્નો : ૩૫

નોંધ : વિદ્યાર્થીએ માત્ર ૩૫ પ્રશ્નો જ ટીક કરવાના રહેશે. જો વધારે ટીક કરેલ હશે તો પ્રથમ ૩૫ પ્રશ્નો જ ગણતરીમાં લેવામાં આવશે.

Q:1 Autotrophs are known to use _____ as carbon source
(A) Glucose (B) CO_2 (C) Methane (D) Glycerol

Q:2 *Photobacterium spp.* can use _____ as source of energy
(A) Light (B) Organic Chemical (C) Inorganic chemicals (D) Oxygen

Q:3 Inorganic chemicals can be used as electron donor by _____
(A) Phototrophs (B) Chemotrophs (C) Lithotrophs (D) Organotrophs

Q:4 *E. coli* is _____
(A) Strict anaerobic (B) Strict aerobe (C) Facultative aerobe (D) Facultative anaerobe

Q:5 Bacteria that can grow in Freeze are to be _____
(A) Thermophile (B) Mesophile (C) Hyperthermophile (D) Psychrophile

Q:6 *H. pylori*- A bacterium found in our stomach is _____
(A) An acidophile (B) A basophile (C) A neutrophile (D) A mixophile

Q:7 Bacteria cannot grow in Jam-Jellies due to _____
(A) High osmotic pressure (B) High salt (C) High viscosity (D) Gelatinous consistency

Q:8 _____ is not true for 'Peptone'
(A) It is derived from Protein (B) It is a rich source of Carbon and Nitrogen
(C) It is rich with 'Biotin' (D) It is used in microbiological media

Q:9 EMB and Mac'Conkey agar contain _____
(A) Lactose (B) Bile salt (C) dyes (D) All of the above

Q:10 _____ is the example of Enriched media
(A) Blood agar (B) Ashby's agar (C) Simmons citrate agar (D) Urea broth

Q:11 _____ require the help of ATP
(A) Simple diffusion (B) Facilitated diffusion (C) Active transport (D) Passive transport

Q:12 _____ mechanism of transport works against concentration gradients
(A) Simple diffusion (B) Facilitated diffusion (C) Active transport (D) Passive transport

Q:13 _____ are biological molecules that catalyze the chemical reactions
(A) Enzyme (B) Hormone (C) Vitamins (D) Cofactors

Q:14 All enzymes are proteins except_____
(A) Isozymes (B) Ribozyme (C) Abzymes (D) Autozymes

Q:15 The enzymes usually act within the cells are called _____ enzymes
(A) Exo enzymes (B) Endo enzyme (C) Inducible enzyme (D) Constitutive enzyme

Q:16 In Enzyme, traces of metal ions such as Cu_2+, Mg_2+, Zn_2+ etc. act as
(A) Co factor (B) Co enzyme (C) Prosthetic group (D) Inhibitor

Q:17 Full form of IUB is _____
(A) International union of Biology (B) International union of Biotechnology
(C) International union of Biochemistry (D) International union of Bioinformatics

Q:18 _____is that amount of enzyme catalyzing the conversion of one mole of substrate to product in one second.
(A) Katal (B) International Unit (C) Molar activity (D) Volume activity

Q:19 A prosthetic group is bound to the apo-enzyme by _____bonds.
(A) Covalent (B) Ionic (C) Hydrogen (D) Coordinate

Q:20 The active site is the specific region of the enzyme which combines with the _____
(A) Substrate (B) Product (C) Inhibitor (D) Activator

Q:21 Who suggested the 'Lock and Key Theory' of enzyme activity
(A) Emil Fischer (B) Koshland (C) Wilhelm Kuhne (D) Berzelius

Q:22 _____ is not enzyme.
(A) Pepsin (B) Trypsin (C) lecithin (D) Renin

Q:23 _____ is solidifying agent
(A) Agar-Agar (B) Gelatin (C) Silica gel (D) All of the above

Q:24 Find Incorrect EC number and Type of Enzyme
(A) EC 1 = Oxidoreductases (B) EC 2 = Transferases (C) EC 3 = Hydrolases (D) EC 4 = Ligases

Q:25 _____ is numerically equal to the substrate concentration at which the half of the enzyme molecules are associated with substrate
(A) V max (B) K_m (C) ES (D) k

Q:26 _____ is the most common mode of cell division among bacteria.
(A) Binary fission (B) Budding (C) Fragmentation (D) Conidiospores formation

Q:27 Arrange the intermediates in order as they form in Glycolysis
1. Glycerate-2 phosphate 3. Glycerate-1,3-biphosphate
2. Glycerate-3 phosphate 4. Glyceraldehyde-3 phosphate
(A) 1-2-4-3 (B) 4-3-1-2 (C) 4-2-1-3 (D) 4-3-2-1

Q:28 How much energy is released when ATP is converted to ADP + Pi
(A) -7.3 Kcal (B) -7.7 Kcal (C) - 3.4 Kcal (D) -10.3 Kcal

Q:29 _____ is not the part of TCA cycle
(A) Citric acid (B) Glucose (C) Succinic acid (D) Oxalic acid

Q:30 How many ATP produced from single TCA cycle
(A) 24 (B) 12 (C) 30 (D) 36

Q:31 _____ Protein is present in Hair & Nails
(A) Keratin (B) Collagen (C) Myosin (D) Melanin

Q:32 Arrange the phases in order as per Growth Curve
1. Death phase 3. Log Phase 2. Lag Phase 4. Stationary Phase
(A) 1-2-4-3 (B) 4-3-1-2 (C) 4-2-1-3 (D) 2-3-4-1

Q:33 The enzyme activity may be affected by
(A) pH & temperature (B) concentration of enzyme
(C) concentration of substrate (D) all of the above

Q:34 _____ is not true for antibiotics
(A) Microbial origin (B) Secondary metabolites
(C) Effective in small amount (D) Made from inorganic chemicals

Q:35 _____ bond present in Carbohydrate
(A) Peptide bond (B) Glycoside bond (C) Ester bond (D) Phosphodiester bond

Q:36 The class of enzymes that break molecules without adding water molecules, are classified as
(A) Hydrolyases (B) Lyases (C) Transferases (D) Ligases

Q:37 _____ type of RNA brings the amino acid in Transcription process
(A) m-RNA (B) t-RNA (C) r-RNA (D) Sn-RNA

Q:38 _____ is Non-Reducing sugar
(A) Glucose (B) Sucrose (C) Maltose (D) Xylose

Q:39 _____ is present in RNA but not in DNA
(A) Adenine (B) Thiamine (C) Cytosine (D) Uracil

Q:40 _____ is not aromatic amino acid
(A) Alanine (B) Tyrosine (C) Tryptophan (D) Phenylalanine

Q:41 _____ is not an energy rich compound
(A) ATP (B) Glucose (C) Polyphosphate (D) Phosphoenolpyruvate-PEP

Q:42 'Lysozymes' are belongs to _____ class of enzymes
(A) Oxido-reductase (B) Ligase (C) Hydrolyase (D) Lyases

Q:43 In TCA cycle, _____ is not produced
(A) NADH (B) $FADH_2$ (C) GTP (D) H_2O

Q:44 _____ fermentation occur in Muscles
(A)Lactic acid fermentation(B) Alcohol fermentation (C) Formic acid fermentation (D)All of the above

Q:45 _____ is the terminal electron acceptor in aerobic reparation
(A) Hydrogen (B) Oxygen(O_2) (C) Carbon dioxide (D) NADP

Q:46 Who is known as the father of Chemotherapy?
(A) Louise pasture (B) Metchnikoff (C) Paul Ehrlich (D) Alexander Flaming

Q:47 Cells numbers can be measured in terms of _____
(A) Density (B) Colony forming Units (C) Weight per volume (D) None of the above

Q:48 The temperature at which excellent growth occur is known as _____
(A) Optimum temperature (B) Cardinal temperature (C) Maximum temperature (D) Minimum temperature

Q:49 Halophiles are resistant to _____
(A) High temperature (B) High sugar concentration (C) High salt concentration (D) High pH

Q:50 Competitive, Non competitive and Uncompetitive are the types of___
(A) Enzyme inhibitors (B) Enzyme inducers (C) Enzyme activators (D) Enzyme repressor