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|  | **SEMESTER: VI SAMPLE MCQs** |  |  |  |  |
|  | SEMESTER: IV SAMPLE MCQsT.Y.B.Sc. ZOOLOGYCOURSE CODE: USZO602 PAPER: II | | | | |
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|  | TITLE OF THE PAPER: Enzymology, Homeostasis, Endocrinology and Animal Tissue culture | | | | |
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|  | **Question** | **Answer1** | **Answer2** | **Answer3** | **Answer4** |
|  |  |  |  |  |  |
|  | **Unit 1: Enzymology** |  |  |  |  |
| 1 | NAD and NADP are derived from \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | niacin | riboflavin | biotin | folic acid |
| 2 | \_\_\_\_\_\_\_\_\_\_\_\_ recognised enzymes from the fermentation process by yeast. | Hugo deVries | Edward Bucher | Muller | Isaac Newton |
| 3 | The word 'enzyme' was coined by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Emil Fischer | Daniel Koshland | Michaelis and Menten | Frederick Kuhne |
| 4 | The term actvation energy was introduced by \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Svante Arrhenius | Morgan | Bridges | Mendel |
| 5 | Identify the enzyme catalyzed reaction from the following: | Haber Process | Acid hydrolysis of sucrose | nitrogen fixation by bacteria | break down of peroxide without catalase |
| 6 | Expand IUB. | International Union of Biology | International Union of Biochemistry | International Union of Biotechnology | International Union of Biophysics |
| 7 | Digestive enzymes are examples of \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | ligases | transferases | hydrolases | Isomerases |
| 8 | Enzymes that act on specifically amino, phosphate or methyl radical show \_\_\_\_\_\_\_\_\_\_ . | group specificity | absolute specificity | stereochemical specificity | linkage specificity |
| 9 | Enzyme activators are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ . | sugars | metal ions | specific groups | Acids |
| 10 | Doubling of enzyme activity for every 10 ⁰C rise in temperature is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | enzyme coefficient | temperature coefficient | minimal activity | activity inhibition |
| 11 | Optimum pH for activity of pepsin in the stomach is \_\_\_\_\_\_. | 8 | 6 | 1.5 | 7 |
| 12 | Michaelis-Menten curve is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | bell shaped | straight line | parabolic | Hyperbolic |
| 13 | Example of an enzyme inhibitor is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | snake venom | coenzyme | cofactor | prosthetic group |
|  | **Unit 2: Homeostasis** |  |  |  |  |
|  |  |  |  |  |  |
| 14 | The existence of body clock was shown by \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Charles Darwin | de Mairan | TH Morgan | Mendel |
| 15 | Supra Chiasmatic Nuclei control the secretion of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | melatonin | insulin | plasma proteins | TSH |
| 16 | \_\_\_\_\_\_\_\_\_\_\_\_ is the important environmental factor that adjusts the internal body clock. | Oxygen level | light | temperature | carbon dioxide level |
| 17 | Endothermy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | warming of body by external temperature | warming of the body metabolic heat production | not concerned with body temperature | concerned with ionic regulation |
| 18 | Ectothermy is \_\_\_\_\_\_\_\_\_\_\_\_. | oxygen level | metabolic heat production | concerned with osmoregulation | is not concerned with body heat |
| 19 | Poikilotherms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | actively regulate body temperature | are not concerned with body temperature | passively adjust their body temperature | do not show any behavioural adaptations |
| 20 | The word 'Homeostasis' was coined by \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Albert Einstein | Charles Darwin | Russel | Walter Cannon |
| 21 | The advantage of constant internal environment was first pointed out by \_\_\_\_\_\_\_\_\_\_\_\_. | Claude Bernard | Michaelis | Marie Curie | Rutherford |
| 22 | Brown adipose tissue is \_\_\_\_\_\_\_\_\_\_. | found in fish | found in amphibians | special thermogenic tissue found in mammals | found in reptiles |
| 23 | Conduction is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | the exchange of heat through infra red radiation | transfer of heat by physical contact between two bodies | transfer of heat through fluids | loss of heat through vaporization |
| 24 | Convection is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | transfer of heat by physical contact between two bodies | the exchange of heat through infra red radiation | loss of heat through vaporization | transfer of heat through fluids |
| 25 | Dry and water poor environment is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | xeric terrestrial environment | humidic terrestrial environment | aquatic environment | Rainforest |
| 26 | Salt water ingestion and salt excretion are adaptations to \_\_\_\_\_\_\_\_\_\_. | maintain body heat | to maintain osmotic balance | to release energy | to maintain blood sugar |
| 27 |  |  |  |  |  |
|  | **Unit 3: Endocrinology** |  |  |  |  |
| 28 | Parathormone regulates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Calcium and Phosphorus levels | level of Fe | blood glucose level | biological oxidation |
| 29 | Hormone-receptor complex actvates a membrane protein called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | A protein | B protein | C pprotein | G protein |
| 30 | Adenohypophysis is derived from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Mesoderm | endoderm | ectodermal Rathke's pouch | pharyngeal pouch |
| 31 | Melanocyte stimulating hormone is secreted by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | pars intermedia | pars distalis | pars tuberalis | pars nervosa |
| 32 | Somatotropic hormone is concerned with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | regulation of excretion | osmoregulation | thermoregulation | increasing overall growth of the body |
| 33 | Parafollicular cells secrete \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | TSH | thyroxine | T3 | Thyrocalcitonin |
| 34 | Delta cells of pancreas secrete \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Insulin | glucagon | somatostatin | Gastrin |
| 35 | Endocrine part of pancreas is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Acinus | islets of Langerhans | connective tissue | epithelial tissue |
| 36 | Glucagon increases \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | glycogenesis | blood calcium level | glycogenolysis | sugar uptake by cells |
| 37 | Oxyphil and chief cells are seen in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | parathyroid gland | adrenal gland | pancreas | Liver |
| 38 | C cells are seen in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | liver | lungs | thyroid gland | Pancreas |
| 39 | Identify the emergency hormone from the following: | Adrenaline | androgen | glucagon | Estrogen |
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|  | **Unit 4: Animal tissue culture** |  |  |  |  |
|  |  |  |  |  |  |
| 40 | Aseptic conditions should be maintained in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Tissue culture laboratories | Hotels | Houses | Parks |
| 41 | Which of the following can be used for sterilization? | Baking soda | Ehtly alcohol | Salt | Alkali |
| 42 | What is the temperature of sterilization in an autoclave? | 100⁰C | 300⁰C | 50⁰C | 120⁰C |
| 43 | Membrane filters are used for sterilizing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | solid media | chemical medai | heat sensitive biological fluid media | agar media |
| 44 | Normal laminar air flow hood has \_\_\_\_\_\_\_\_\_\_\_\_\_ for providing sterile environment. | infra red light | ultra violet light | visible white light | neon light |
| 45 | Pipettes are kept sterile while in use by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | plugging with cotton at the top | not using any plugs | plugging with cotton at nozzle | wiping with salt |
| 46 | The process of transfering of culture from one container to another aseptically is called \_\_\_\_\_\_\_\_\_\_\_\_. | pouring | smearing | sprinkling | Dabbing |
| 47 | An example of biofluid is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | saline | iodine solution | serum | distilled water |
| 48 | Amniotic fluid is an example of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | chemically defined medium | artificial medium | solid medium | natural biological fluid medium |
| 49 | What is the advantage of using antibiotics in culture media? | to promote antibiotic resistance | to promote poor antiseptic technique | to control bacterial contamination | to create antimetabolite effects |
| 50 | Double cover slip culture was first used by \_\_\_\_\_\_\_\_\_\_\_\_. | Harrison | Steward, Caplin and Miller | Jones, Riker and Wu | Maximov |
| 51 | Salts are used in culture media to \_\_\_\_\_\_\_\_\_\_. | retain osmotic balance and regulate membrane potential | serve as energy sources | serve as sources of nitrogen | serve as organic supplements |