



Roll No: _____

SUBJECT: BIOLOGY (B-17) IN Higher EDUCATION DEPARTMENT (ADVT: NO. 01/2016 S. 01)

Time: 1 hour 30 minutes

Total Marks= (100)

DIRECTION: Each of the questions below is followed by four suggested answers. Select the one that is BEST in each case and shade your chosen option A, B, C or D. as shown in the sample given below:

Sample Q: Quaid-e-Azam was born at:

| | | | |
|-----------|--------|-----------|---------------|
| A. | Lahore | B. | Karachi |
| C. | Quetta | D. | None of these |

Correct answer is “**Karachi**” mentioned in option “**B**”, so you will shade option “**B**” on your Answer Sheet as shown in the sample below:

**NOTE:**

- CANDIDATES ARE ADVISED TO CHECK HIS / HER QUESTION BOOK BEFORE THE START OF TEST & REPORT ANY MISS-PRINTING, PAGE MISSING OR QUESTION MISSING TO INVIGILATOR.
- NO NEGATIVE MARKING
- CALCULATORS ARE NOT ALLOWED
- PLEASE DON'T WRITE OVER THE BOOKLET AND RETURN IT TO THE EXAM: STAFF BEFORE LEAVING THE EXAM: HALL. OTHERWISE YOU WILL BE DISQUALIFIED FROM THE TEST.

SELECT THE BEST ANSWER FOR FOLLOWING QUESTIONS:

| | | | |
|----------|---|--|--|
| Q. No. : | 1 | The scientific study of livings is called? | |
| | | A. Anatomy | B. Biology |
| | | C. Geology | D. Zoology |
| Q. No. : | 2 | The word “BIOLOGY” has been derived from _____ word? | |
| | | A. Latin | B. English |
| | | C. Greek | D. French |
| Q. No. : | 3 | According to modern system of taxonomy, living organisms have been classified into? | |
| | | A. Three Kingdoms | B. Five Kingdoms |
| | | C. Two Kingdoms | D. Six Kingdoms |
| Q. No. : | 4 | Kingdom Protocista includes _____ ? | |
| | | A. Fungi | B. Prokaryotes |
| | | C. Protists | D. Plantae |
| Q. No. : | 5 | Kingdom Fungi includes _____ ? | |
| | | A. A cellular, eukaryotic organisms | B. Non-chlorophylls, multicellular eukaryotic organisms |
| | | C. Non-chlorophylls, multicellular, thallophytic organisms | D. Chlorophyllus, multicellular, eukaryotic Organisms |
| Q. No. : | 6 | Earthworm is included in _____ ? | |
| | | A. Kingdom Plantae | B. Kingdom Protocista |
| | | C. Kingdom Monera | D. Kingdom Animalia |
| Q. No. : | 7 | The Study of organisms inhabiting the sea and Ocean and the physical and chemical characteristics of their environment is: | |
| | | A. Social Biology | B. Marine Biology |
| | | C. Environmental Biology | D. Fresh Water Biology |
| Q. No. : | 8 | The branch of Biology which deals with the use of data and techniques of engineering & technology concerning living organisms is: | |
| | | A. Human Biology | B. Environmental Biology |
| | | C. Genetics | D. Bio-technology |



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|----------|----|---|---|
| Q. No. : | 9 | The branch in which organism's life cycle, mode of transmission and interaction with their hosts are studied is: | |
| | | A. Anatomy | B. Physiology |
| | | C. Parasitology | D. Social Biology |
| Q. No. : | 10 | The molecules of living matter that provide building blocks are mostly based on: | |
| | | A. Carbon | B. Nitrogen |
| | | C. Hydrogen | D. Ammonia |
| Q. No. : | 11 | Human blood is an example of _____ ? | |
| | | A. Organelle | B. Tissues |
| | | C. Organic compound | D. Inorganic compounds |
| Q. No. : | 12 | With different chemical arrangements and formation Of complex molecules, the life emerges on the level of the? | |
| | | A. Cells | B. Tissues |
| | | C. Organs | D. Organ System |
| Q. No. : | 13 | Organelles are _____ ? | |
| | | A. Unicellular structures | B. Multi-cellular structures |
| | | C. Sub-cellular structures | D. Non-cellular structures |
| Q. No. : | 14 | Functional unit of DNA Is _____ ? | |
| | | A. Nucleus | B. Genes |
| | | C. Chromosomes | D. Nucleolus |
| Q. No. : | 15 | Various tissue types combine to make up _____ ? | |
| | | A. Cells | B. Organs |
| | | C. Organ System | D. Organelles |
| Q. No. : | 16 | Two or more populations of different species living and interacting in the same area form | |
| | | A. Biosphere | B. Community |
| | | C. Population System | D. Ecosystem |
| Q. No. : | 17 | A group of similar cells that perform a specific function is: | |
| | | A. Organ | B. Tissues |
| | | C. Organelle | D. Organ System |
| Q. No. : | 18 | Which of the following is an example of "molecule"? | |
| | | A. Chloroplast | B. A Nerve Cell |
| | | C. DNA | D. Hydrogen |
| Q. No. : | 19 | A group of very similar inter breeding organisms constitutes? | |
| | | A. Biosphere | B. Ecosystem |
| | | C. Population | D. Species |
| Q. No. : | 20 | Members of one species inhabiting the same are form _____ ? | |
| | | A. Species | B. Community |
| | | C. Ecosystem | D. Population |
| Q. No. : | 21 | On the basis of collected facts and figures, a scientist formulates a factitive statement called: | |
| | | A. Observation | B. Research work |
| | | C. Hypothesis | D. Inductive Reasoning |
| Q. No. : | 22 | Robert Hooke discovered _____ ? | |
| | | A. Nucleus | B. Mitochondria |
| | | C. Cell | D. DNA |
| Q. No. : | 23 | Steps Involved in scientific method are ? | |
| | | A. Hypothesis → Accumulated data → observation & experimentation → conclusion | B. New data → Conclusion → Accumulated data → Observation & experimentation |
| | | C. Accumulated data – New data – Observation & experimentation – Hypothesis → Conclusion | D. Accumulated data → Hypothesis → Observation & experimentation → New data → Conclusion |
| Q. No. : | 24 | Malaria is associated with _____ ? | |
| | | A. Culex Mosquito | B. Culiesta Mosquito |
| | | C. Anopheles Mosquito | D. Culex & Anopheles Mosquito |



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|----------|----|--|---|----|---|
| Q. No. : | 25 | Biologist 'Grass' discovered the life cycle of plasmodium in _____ ? | | | |
| | | A. | 1896 | B. | 1897 |
| | | C. | 1898 | D. | 1899 |
| Q. No. : | 26 | The first antibiotic to be discovered was _____ ? | | | |
| | | A. | Penicillin | B. | Cephalosporin |
| | | C. | Amino glycosides | D. | Erythromycin |
| Q. No. : | 27 | Immunization by vaccination was first introduced by? | | | |
| | | A. | Fleming in 1945 | B. | Florey & Chain in 1975 |
| | | C. | Flore & Chain in 1795 | D. | Edward Jenner in 1795 |
| Q. No. : | 28 | The science of growing terrestrial plants in an aerated solution is _____ ? | | | |
| | | A. | Hydrodynamics | B. | Hydroponics |
| | | C. | Hydroponics | D. | None of them |
| Q. No. : | 29 | An educated guess is called: | | | |
| | | A. | Accumulated Data | B. | Observation |
| | | C. | Hypothesis | D. | Conclusion |
| Q. No. : | 30 | Dolly, the sheep was a highly successful clone from a somatic cell, reported back in _____ ? | | | |
| | | A. | 1993 | B. | 1994 |
| | | C. | 1995 | D. | 1996 |
| Q. No. : | 31 | Crop rotation helps in _____ ? | | | |
| | | A. | Growth of pathogens | B. | Soil Infertility |
| | | C. | Slowing of crops growth | D. | Eradication of disease |
| Q. No. : | 32 | People living in high altitudes (like mountains) usually have a _____ ? | | | |
| | | A. | smaller number of Red Blood Cells | B. | larger number of Red Blood Cells |
| | | C. | smaller number of White Blood Cells | D. | larger number of White Blood Cells |
| Q. No. : | 33 | Which character differentiates living things from non-living organisms? | | | |
| | | A. | They live in the same ecosystem. | B. | They are highly organized and complex made of one or more cells and contain genetic material |
| | | C. | They are acted upon by the same environment | D. | Both a and b |
| Q. No. : | 34 | Which Vitamin is needed for the formation of a light-sensitive pigment in the retina. | | | |
| | | A. | Vitamin A | B. | Vitamin C |
| | | C. | Vitamin D | D. | B complex |
| Q. No. : | 35 | The average internal temperature of human body is _____ ? | | | |
| | | A. | 35°C | B. | 36°C |
| | | C. | 37°C | D. | 38°C |
| Q. No. : | 36 | The study of fossils is called? | | | |
| | | A. | Environmental Biology | B. | Historical biology |
| | | C. | Palaeontology | D. | Social biology |
| Q. No. : | 37 | About _____ of the body weight of a mammal is water? | | | |
| | | A. | 60% | B. | 65% |
| | | C. | 70% | D. | 75% |
| Q. No. : | 38 | The experiments on DNA molecules in chromosomes for knowing the basis of inherited diseases are conducted by? | | | |
| | | A. | Molecular biologists | B. | Microbiologists |
| | | C. | Freshwater biologists | D. | Social biologist |
| Q. No. : | 39 | On wound _____ fight foreign particles, like bacteria? | | | |
| | | A. | White Blood cells | B. | Red Blood Cells |
| | | C. | Platelets | D. | Plasma |
| Q. No. : | 40 | Synthetic insulin from pork was formed by which technique? | | | |
| | | A. | Biotechnology | B. | Social biological techniques |
| | | C. | Parasitology | D. | Both a and c |



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| Q. No. : | 41 | Blood is carried towards the heart by _____ ? | |
| | | A. Arteries | B. Capillaries |
| | | C. Veins | D. none of these |
| Q. No. : | 42 | The branch of biology which deals with the study of social behavior and communal life of human beings living in any environment is called? | |
| | | A. Environmental biology | B. Social biology |
| | | C. Human biology | D. Both b and c |
| Q. No. : | 43 | _____ is essential for the formation of hemoglobin. | |
| | | A. Calcium | B. Iron |
| | | C. Water | D. Carbohydrates |
| Q. No. : | 44 | Out of 92 naturally occurring chemical elements how many are considered as bio-elements? | |
| | | A. 6 | B. 16 |
| | | C. 26 | D. 15 |
| Q. No. : | 45 | _____ are needed as a source of energy for the vital activities of the body? | |
| | | A. Calcium | B. Iron |
| | | C. Water | D. Carbohydrates |
| Q. No. : | 46 | Oxygen accounts for _____ % of total human body mass? | |
| | | A. 65% | B. 18% |
| | | C. 10% | D. 3% |
| Q. No. : | 47 | The atoms of different elements combine with each other through ionic or covalent bonding to produce compounds this stable form is called: | |
| | | A. An organ | B. A molecule |
| | | C. Tissue | D. Both a and c |
| Q. No. : | 48 | Which one of them is a micro-molecule? | |
| | | A. Polysaccharide | B. Protein |
| | | C. Hemoglobin | D. ATP |
| Q. No. : | 49 | A structure formed by groups of similar cells organized into loose sheets or bundles performing similar functions is called as: | |
| | | A. An organ | B. An organism |
| | | C. A Tissue | D. A Cell |
| Q. No. : | 50 | Haemodialysis means cleaning of _____ ? | |
| | | A. Urine | B. Blood |
| | | C. Glomerular filtrate | D. Coelomic fluid |
| Q. No. : | 51 | In animals coordination is achieved by means of? | |
| | | A. Nervous system | B. Endocrine system |
| | | C. Respiratory system | D. Both A and B |
| Q. No. : | 52 | Production of sweat and sebum is related with? | |
| | | A. Skin | B. Liver |
| | | C. Lungs | D. GIT |
| Q. No. : | 53 | Group of living organisms of the same species living in the same place at the same time is called? | |
| | | A. Community | B. Population |
| | | C. Ecosystem | D. Biome |
| Q. No. : | 54 | The evaporative cooling in the respiratory tract of dogs is called? | |
| | | A. Vasodilation | B. Vasoconstriction |
| | | C. Panting | D. All of these |
| Q. No. : | 55 | Different species of plants and animals living in the same habitat is called? | |
| | | A. Population | B. Community |
| | | C. Biome | D. Habitat |
| Q. No. : | 56 | Which of the following pathogen type cause disease that can be treated with antibiotics? | |
| | | A. Bacteria | B. Fungi |
| | | C. Virus | D. none of these |
| Q. No. : | 57 | A large regional community primarily determined by climate is called? | |
| | | A. Population | B. Community |
| | | C. Biome | D. Habitat |



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| Q. No. : | 58 | Most cell membranes are composed principally of? | | | |
| | | A. | DNA ad protein | B. | Protein and Lipids |
| | | C. | Protein and Chitin | D. | Protein and RNA |
| Q. No. : | 59 | The concept that various organisms dominated this planet during various geological time period and thus placing organisms in a time squence came from the studies by? | | | |
| | | A. | Environmental biologist | B. | Paleontologist |
| | | C. | Marine biologist | D. | Social biologist |
| Q. No. : | 60 | Normally, in the process of osmosis, the net flow of water molecules into or out of the cell depends upon differences in the? | | | |
| | | A. | Concentration of water molecules inside and outside the cell | B. | Concentration of enzymes on either side of the cell membrane |
| | | C. | Rate of molecular motion on either side of the cell membrane | D. | None of these |
| Q. No. : | 61 | An unbroken series of species arranged in ancestors to descendent sequence with each later species having evolved from one that immediately preceded it is called? | | | |
| | | A. | Biome | B. | Phyletic lineage |
| | | C. | Community | D. | Population |
| Q. No. : | 62 | Proteins are made from amino acids by the process of _____ ? | | | |
| | | A. | Hydrolysis | B. | Pinocytosis |
| | | C. | Dehydration synthesis | D. | Active transport |
| Q. No. : | 63 | Biological sciences have a set methodology and it is based on? | | | |
| | | A. | Experimental inquiry | B. | Esthetic preference |
| | | C. | Philosophical ideas | D. | Imaginations |
| Q. No. : | 64 | Which is an organic compound found in most cells? | | | |
| | | A. | Water | B. | Glucose |
| | | C. | Oxygen | D. | Sodium chloride |
| Q. No. : | 65 | A series of hypothesis supported by the results of many tests is called? | | | |
| | | A. | Scientific law | B. | Theory |
| | | C. | Data | D. | Deduction |
| Q. No. : | 66 | Which are the four most abundant elements in living cells? | | | |
| | | A. | carbon, oxygen, nitrogen, sulfur | B. | carbon, oxygen, hydrogen, nitrogen |
| | | C. | carbon, oxygen, sulfur, phosphorus | D. | carbon, sulfur, hydrogen, magnesium |
| Q. No. : | 67 | Which one is not correct for a productive theory? | | | |
| | | A. | It is predictive | B. | It has explanatory power |
| | | C. | It discourages suggestion of different hypotheses | D. | None of these |
| Q. No. : | 68 | Conclusion of Mendels work latter became a _____ ? | | | |
| | | A. | Scientific hypothesis | B. | Theory |
| | | C. | Scientific law | D. | Productive theory |
| Q. No. : | 69 | Starch is converted into maltose by? | | | |
| | | A. | Diastase | B. | Invertase |
| | | C. | Maltase | D. | Amylase |
| Q. No. : | 70 | Breeders have developed new and better varieties of food items by using which technique? | | | |
| | | A. | Pasteurization | B. | Hydroponic culture technique |
| | | C. | Genetic engineering | D. | Biological control techniques |
| Q. No. : | 71 | Co-enzyme is often formed from? | | | |
| | | A. | Lipid | B. | Protein |
| | | C. | inorganic ion | D. | Vitamin |
| Q. No. : | 72 | Production of genetically identical copies of organisms/cells by asexula reproduction is called? | | | |
| | | A. | Mitosis | B. | Replication |
| | | C. | Cloning | D. | Biological control |



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| Q. No. : | 73 | Messenger RNA is formed in _____ ? | | | |
| | | A. Nucleus | B. Chloroplast | | |
| | | C. Mitochondria | D. none of these | | |
| Q. No. : | 74 | Astronauts may use which technique to grow fruits and vegetables? | | | |
| | | A. Tissue culture techniques | B. Cloning | | |
| | | C. Pasterisation | D. Hydroponic culture technique | | |
| Q. No. : | 75 | Number of chromosomes in E.coli? | | | |
| | | A. 1 | B. 2 | | |
| | | C. 4 | D. 6 | | |
| Q. No. : | 76 | Which statement is incorrect for pasteurization? | | | |
| | | A. It is used to preserve yogurt and milk | B. It was developed by Louis Pasteur. | | |
| | | C. It involves heating the substance at high temperature for just few sec. | D. It can be used to preserve vegetables and meat. | | |
| Q. No. : | 77 | Protein factory is _____ ? | | | |
| | | A. Nucleus | B. Ribosome | | |
| | | C. golgi complex | D. Centriole | | |
| Q. No. : | 78 | What is the mode of transmission of Hepatitis virus? | | | |
| | | A. Aerosol | B. Parental (via blood) | | |
| | | C. Skin penetration | D. Unknown | | |
| Q. No. : | 79 | Smallest disease causing agents in plants are? | | | |
| | | A. Virion | B. Mycoplasma | | |
| | | C. Viroids | D. Prions | | |
| Q. No. : | 80 | Which disease can be controlled by vaccination? | | | |
| | | A. Measles | B. Cancer | | |
| | | C. Diabetes | D. Heart attack | | |
| Q. No. : | 81 | The major cell infected by the HIV is lymphocyte? | | | |
| | | A. helper-T | B. B | | |
| | | C. both T and B | D. none of these | | |
| Q. No. : | 82 | Vaccine was first developed by _____ ? | | | |
| | | A. Louis Pasture | B. Edward Jenner | | |
| | | C. Jaber Ibn Hayan | D. Aristotle | | |
| Q. No. : | 83 | Pigment present in red algae is _____ ? | | | |
| | | A. Fucoxanthin | B. Phycocyanin | | |
| | | C. Phycoerythrin | D. Bilirubin | | |
| Q. No. : | 84 | Which disease has been totally eradicated from the world because of effective vaccination? | | | |
| | | A. Measles | B. Polio | | |
| | | C. Small pox | D. Hepatitis | | |
| Q. No. : | 85 | Nutrition in fungi is _____ ? | | | |
| | | A. Photosynthetic | B. Chemosynthetic | | |
| | | C. Completely parasitic | D. Absorptive heterotrophs | | |
| Q. No. : | 86 | Which of the following statement is incorrect about antibiotics? | | | |
| | | A. Used They are used against microorganisms | B. They are always effective against bacteria | | |
| | | C. They are used in diseases like tuberculosis and pneumonia | D. They are derived from bacteria only | | |
| Q. No. : | 87 | Fungi resemble plants because they lack _____ ? | | | |
| | | A. Cell wall | B. Cytoplasm | | |
| | | C. Centriole | D. Nucleus | | |
| Q. No. : | 88 | Which treatment is instituted in a cancerous patient? | | | |
| | | A. Antibiotic therapy | B. Radiotherapy | | |
| | | C. Gene therapy | D. None of these | | |
| Q. No. : | 89 | Which is a parasitic plant? | | | |
| | | A. Cuscuta | B. Rose | | |
| | | C. Ferns | D. Mosses | | |



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| Q. No. : | 90 | Which statement is incorrect for cloning? | | | |
| | | A. | The nucleus of a fertilized egg is replaced by the nucleus from the cell of a fully developed individual | B. | Division of a single egg into one or more separate embryos. |
| | | C. | The individual is the mirror image of the parent organism | D. | It involve methods of sexual reproduction |
| Q. No. : | 91 | True roots absent in _____ ? | | | |
| | | A. | Ferns | B. | Bryophytes |
| | | C. | Gymnosperms | D. | Angiosperms |
| Q. No. : | 92 | Removal or degradation of environmental pollutants or toxic materials by living organisms is called _____ ? | | | |
| | | A. | Integrated disease management | B. | Hydroponic culture technique |
| | | C. | Pasteurization | D. | Bioremediation |
| . No. : | 93 | The mechanism for ATP synthesis is _____ ? | | | |
| | | A. | Chemosynthesis | B. | Photosynthesis |
| | | C. | Phosphorylation | D. | Chemiosmosis |
| Q. No. : | 94 | Which of the following is not a viral disease? | | | |
| | | A. | Cowpox | B. | Mumps |
| | | C. | Tetanus | D. | Small pox |
| Q. No. : | 95 | Enzyme present in the saliva is _____ ? | | | |
| | | A. | Lipase | B. | Trypsin |
| | | C. | Ptyalin | D. | Invertase |
| Q. No. : | 96 | In human body 99% of total mass is formed of _____ ? | | | |
| | | A. | 16 Bio-elements | B. | 12 Bio-elements |
| | | C. | 10 Bio-elements | D. | 6 Bio-elements |
| Q. No. : | 97 | Nitrogen is present in _____ ? | | | |
| | | A. | Carbohydrates | B. | Proteins |
| | | C. | Lipids | D. | Carbonates |
| Q. No. : | 98 | Biological organization is _____ ? | | | |
| | | A. | Simple | B. | Advance |
| | | C. | Complex | D. | highly complex |
| Q. No. : | 99 | Operculum is present in _____ ? | | | |
| | | A. | bony fish | B. | sea fish |
| | | C. | cartilaginous fish | D. | none of these |
| Q. No. : | 100 | The arrangement of _____ speaks of the division of labour within cell? | | | |
| | | A. | Molecule | B. | Subatomic particles |
| | | C. | Atoms | D. | Organelles |