**MASTERS PRE-UNIVERSITY COLLEGE, HASSAN 573201**

**BIOLOGY TEST QUESTIONS**

**Topic: Microbes in Human Welfare and Evolution**

1. **The microscopic proteinaceous infectious agents are**

a. Viroids b. Prions c. bacteria d. Bacteriophages

1. ***Monascus purpureus* is a yeast commercially used in the production of**

a. Acetic acid b. Ethanol c. Statins d. Streptokinase

1. **The symbiotic association of fungi with the roots of higher plants is called**

a. Mycorrhiza c. Eubacteria c. Actinomycetes d. Lichens

1. **A common biocontrol agent for the control of plant diseases is**

a. Baculoviruses b. *B. thuringiensis* c. Glomus d. *Trichoderma*

1. **Which of the following is not used as a biopesticide**?

a. *Trichoderma harzianum* b. *Nucleopolyhedroviruses* (NPV)

c. *Xanthomonas campestris* d. *Bacillus thuringiensis*

1. **The majority of Baculoviruses are used as biological control agents because**

a. These are excellent candidates for species specific applications

b. They have no negative impact on non-target plants and animals.

c. Beneficial insects are being conserved

d. All the above

1. **The mode of action of penicillin is**

a. Inhibits protein synthesis b. Inhibits cell wall formation

c. Inhibits DNA synthesis d. Induces cell division

1. **Which of the following enzymes are used in bottled fruit juices to clarify that**

a. Pectinases and proteases b. Catalase and lipases

c. Maltase and alpha amylase d. Amylases and Cellulases

1. **Mycorrhiza does not help the host plant in:**

a. Enhancing its phosphorus uptake capacity b. Increasing its tolerance to drought

c. Enhancing its resistance to root pathogens d. Increasing its resistance to insects.

1. **In which one of the following processes CO2 is not released?**   
    a) Alcoholic fermentation  b) Lactate fermentation   
    c) Aerobic respiration in plants  d) Aerobic respiration in animals
2. **Which of the following is correctly matched for the product produced by them?** a) Acetobacter aceti : Antibiotics  b) Methanobacterium : Lactic acid   
    c) Penicillium notatum : Acetic acid  d) Saccharomyces cerevisiae : Ethanol
3. **Match the items in Column ‘A’ and Column ‘B’ and choose correct answer.**

**Column A Column B**

(i) Lady bird (a) Methano bacterium

(ii) Mycorrhiza (b) Trichoderma

(iii) Biological control (c) Aphids

(iv) Biogas (d) Glomus

The correct answer is: a) i b, ii d, iii c, iv a b) i c, ii d, iii b, iv a

c) i d, ii a, iii b, iv c d) i c, ii b, iii a, iv d

1. **Pasteurization is heating at**
2. 120° C for 60 minutes b. 60° C – 63° C for 30 minutes

c. 70° C for 60 minutes d. 80° C for 30 minutes

1. **Which of the following in sewage treatment removes suspended solids?**
2. Tertiary treatment b. Secondary treatment

c. Primary treatment d. Sludge treatment

1. **Which of the following is wrongly matched in the given table:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Microbe** | **Product** | **Application** |
| **a** | *Monascus purpureus* | statins | Lowering of blood cholesterol |
| **b** | *Streptococcus* | Streptokinase | Removal of clot from blood vessel |
| **c** | *Clostridium butylicum* | Lipase | Removal of oil stains |
| **d** | *Trichoderma polysporum* | Cyclosporin-A | Immunosupressive drug |

1. **Microbe used as leavening agent, where it converts sugars present in dough into carbon dioxide is**

a) *Saccharomyces cerevisiae* b) *Monascus purpureus*

c) Lactobacillus acidophilus d) *Aspergillus flavus.*

1. **Match the evolution concepts with their proposers and select the right option**

|  |  |  |  |
| --- | --- | --- | --- |
| i | Saltation | a | Darwin |
| ii | Formation of life was preceded by chemical evolution | b | Louis Pasteur |
| iii | Reproductive fitness | c | De Vries |
| iv | Life comes from pre-existing life | d | Oparin and Haldane |

a) i=c, ii=d, iii=a, iv=b b) i=a, ii=b, iii=c, iv=d

c) i=d, ii=c, iii=a, iv=d d) i=c, ii=d, iii=d, iv=a

e) i = c, ii=a, iii=d, iv=b

1. **Which is incorrect**

a) Wings of insects and bats are homologous b) Wings of insects and bats are analogous

c) Wings of bats and birds are homologous d) Wings of insects and birds are analogous

1. **The extinct human ancestor who ate only fruits and hunted with stone weapons was**

a) Dryopithecus b) Ramapithecus c) Australopithecus d) Homo erectus

1. **The prebiotic atmosphere of the earth was of reducing nature. It was transformed into an oxidizing atmosphere of present day due to emergence of**

a) Angiosperms b) Photosynthetic bacteria c) Eukaryotic algae d) Cyanobacteria

1. **According to Darwin, evolution is …………….**

a) A sudden but discontinuous process b) A slow, gradual and continuous process

c) A slow, sudden and discontinuous process d) A slow and discontinuous process

1. **Homo erectus has a large brain, around**

a) 650 – 800 cc b) 900 cc c) 1400 cc d) All the above

1. **Choose the correct series of human evolution**

a) Dryopithecus Homo erectus Australopithecus CroMagnon man

b) Australopithecus Ramapithecus Dryopithecus Homo sapiens

c) Autralopithecus Homo erectus Neanderthal Homo sapiens

d) Homo erectus Australopithecus Croagnon man Neanderthal

1. **According to neo-darwinism new species develop through**

(a) mutation (b) hybridization

(c) continuous variation with natural selection (d) mutation with natural selection

1. **The principle of competitive exclusion was stated by**
2. C. Darwin b. GF Gause c. MacArthur d. Paul Ehrlich
3. **Which of the following is the correct sequence of events in the origin of life?**
4. **Formation of protobionts**
5. **Synthesis of organic polymers**
6. **Synthesis of organic polymers**
7. **Formation of DNA-based genetic systems**
8. i, ii, iii, iv b. i, iii, ii, iv c. ii, iii, i, iv d. ii, iii, iv, i
9. **Which one of the following options gives one correct example each of convergent evolution and divergent evolution?**

**Convergent evolution Divergent evolution**

(a) Eyes of Octopus and mammals Bones of forelimbs of vertebrates

(b) Thorns of Bougainvillea and tendrils of Cucurbita Wings of butterflies and birds

(c) Bones of forelimbs of vertebrates Wings of butterfly and birds

(d)Thorns of Bougainvillea and tendrils of Cucurbita Eyes of Octopus and mammals

1. **Genetic drift operates in…**
2. Non-reproductive population b. Slow reproductive population

c. Small isolated population d. Large isolated population

1. **Which of the following characteristics is mainly responsible for diversification of insects on land?**
2. Eyes b. Segmentation c. Bilateral symmetry d. Exoskeleton
3. **Darwinism explains all the following except…**
4. Offspring with better traits that overcome competition are best suited for the environment
5. Variations are inherited from parents to offspring through genes.
6. Within each species, there are variations
7. Organisms tend to produce more number of offspring that can survive.