

371 PU M Sc Ecology and Environmental Sciences

1 of 100

188 PU_2016_371_E

Brood parasitism refers to:-

- When different species are cheated into raising young of others
- When young are parasitized by Schistosomiasis
- Tick infections of nestlings
- Salmonella* infection in a chicken coop

2 of 100

120 PU_2016_371_E

Name a famous Indian ornithologist:-

- Dr. Salim Ali
- Dr. Amartya Sen
- Dr. S. C. Bose
- Dr. P. Albert

3 of 100

144 PU_2016_371_E

The Calvin - Benson cycle is part of the:-

- Respiration
- Food web
- Photosynthesis
- Nitrogen cycle

4 of 100

161 PU_2016_371_E

Which of the following is a secondary pollutant?

- SO₂
- O₃
- CO
- CO₂

5 of 100

200 PU_2016_371_E

Population will grow geometrically but resources arithmetically and so we would perish A statement broadly similar to the above is attributed to:-

- Bishop Malthus
- Acharya Chankya
- Pope Pius XI

- Thomas Alva Edison

6 of 100

157 PU_2016_371_E

Which of these mammals are not found in India?

- Lions
- Rhinoceros
- Hippopotamus
- Tigers

7 of 100

121 PU_2016_371_E

What is a Common Krait?

- A fish
- A reptile
- A frog
- A salamander

8 of 100

156 PU_2016_371_E

An inverted ecological pyramid of energy flow is seen in:-

- Oceans
- Rainforest
- Desert
- Tundra

9 of 100

113 PU_2016_371_E

During which geological age did the dinosaurs go extinct?

- Pleistocene
- Cretaceous-Tertiary
- Triassic
- Jurassic

10 of 100

217 PU_2016_371_E

Which of these processes cause evolutionary change in populations?

- Growth rate
- Mortality rate
- Genetic drift

- Fecundity

11 of 100

173 PU_2016_371_E

Tick the odd item :-

- Oaks, Teak, Sal
- Camel, Lizards, Birds
- Corals, Sponges, Fishes
- Palms, Ginger, Orchids

12 of 100

152 PU_2016_371_E

Particulate pollutants are:-

- small solid particles and liquid droplets
- small solid particles released into the atmosphere
- liquid droplets in atmosphere
- all of the above

13 of 100

181 PU_2016_371_E

Example of poikilotherms is:-

- Bird
- Snake
- Humans
- Cow

14 of 100

176 PU_2016_371_E

Representatives of four major Arthropod classes include:-

- Canids, felids & bovids
- Annelids, centipedes & polychaetes
- Millepedes, crabs, lepidopterans & arachnids
- Nematodes, earthworms & corals

15 of 100

201 PU_2016_371_E

Which one of the following is 'power house' of a cell?

- Golgi bodies
- Chromosomes
- Nucleolus

- Mitochondria

16 of 100

153 PU_2016_371_E

All are particulate pollutants except:-

- Ozone
- Smoke
- Dust
- Soot

17 of 100

100 PU_2016_371_E

How many Kingdoms have been recognized in biology?

- Four
- Five
- Three
- Seven

18 of 100

132 PU_2016_371_E

Molluscs include:-

- Sharks, prawns & shrimps
- Barnacles, gastropods & oysters
- Finfish, Seaweeds & Arthropods
- Star fish, sea urchins & sea cucumbers

19 of 100

137 PU_2016_371_E

The fraction of solar energy converted to chemical energy by producers is called:-

- Net primary productivity
- Gross primary productivity
- Metabolism
- Biomass

20 of 100

164 PU_2016_371_E

Theory of inheritance of acquired characters was put forward by:-

- Bateson
- Mendel
- Lamarck

- Darwin

21 of 100

149 PU_2016_371_E

Algal bloom results in:-

- Biomagnification
- Eutrophication
- Global warming
- Salination

22 of 100

148 PU_2016_371_E

The green house gases, otherwise called radioactively active gases includes:-

- CH₄
- Carbon dioxide
- N₂O
- CO₂, CH₄ and N₂O

23 of 100

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This is a viviparous snake:-

- Cobra
- Russells Viper
- Python
- Krait

24 of 100

124 PU_2016_371_E

Reproduction in Protista takes place by:-

- Meiosis
- Mitosis
- Fission
- Syngamy

25 of 100

204 PU_2016_371_E

Kaziranga National Park is famous for:-

- Amur tiger
- Dugong
- Snow leopard

- One horned Rhinoceros

26 of 100

189 PU_2016_371_E

Malaria is a disease caused by a:-

- Parasite
- Fungus
- Bacteria
- Virus

27 of 100

136 PU_2016_371_E

Carbohydrates are organic compounds made up of:-

- Carbon, oxygen
- Carbon, amino acids
- Carbon, oxygen, hydrogen and nitrogen
- Carbon, oxygen, hydrogen

28 of 100

108 PU_2016_371_E

The self regulatory mechanism which leads to steady state in living organisms is:-

- Sustainable
- Heterologous
- Phyllotaxis
- Homeostasis

29 of 100

205 PU_2016_371_E

Successful establishment of a new species in an ecosystem is called:-

- Ecesis
- Sere
- Invasion
- Climax

30 of 100

172 PU_2016_371_E

What are the respiratory organs in insects?

- Lungs
- Skin
- Trachea

- Gills

31 of 100

128 PU_2016_371_E

This is a viviparous plant:-

- Banyan
- Neem
- Rhizophora
- Lantana

32 of 100

125 PU_2016_371_E

Endophytes are usually:-

- Fungi
- Protists
- Plants
- Cell organelles

33 of 100

192 PU_2016_371_E

Zoonosis refers to:-

- Transfer of a disease from wild to domestic animal
- Transfer of a disease from a humans to animals
- Transfer of a disease from a wild or domestic animal to human beings
- Diseases transmitted in zoos.

34 of 100

213 PU_2016_371_E

Some plants harbor ants to prevent damage by other herbivores:-

- Anemophily
- Entomophily
- Zoophily
- Myrmecophily

35 of 100

145 PU_2016_371_E

Acid rain is caused by:-

- Discharge of sulphur and nitrogen into the atmosphere
- Forest fires
- CO₂ discharge into atmosphere

- Chlorofluocarbons

36 of 100

184 PU_2016_371_E

Hermaphrodite plant refers to:-

- Plants with some female and some bisexual flowers
- Male and female parts in different flowers in same plant
- Male and female flowers in separate plants
- Flowers with both male and female parts

37 of 100

140 PU_2016_371_E

Fungi are:-

- Heterotrophs
- Autotrophs
- Both
- Neither

38 of 100

109 PU_2016_371_E

The evolutionary history of an organism is known as its:-

- Paleontology
- Phylogeny
- Ancestry
- Taxonomy

39 of 100

160 PU_2016_371_E

Fine organic or inorganic particles suspended in air is called:-

- Gaseous pollutant
- Aerosol
- Particulate pollutant
- None of these

40 of 100

117 PU_2016_371_E

How many species of birds are there globally?

- About 100,000
- About 5000
- About 1000

- About 10,000

41 of 100

165 PU_2016_371_E

Plant growth substances include:-

- Nitrogen, Phosphorus, Potassium
- Adenine, Guanine, Cytosine
- Auxin, Gibberellin, Cytokinin
- Sporopollenin, Chlorophyll

42 of 100

112 PU_2016_371_E

India was part of which continent over 550 million years ago?

- Laurasia
- Gondwana
- Asia
- Europe

43 of 100

180 PU_2016_371_E

Tick the set of invasive weeds in India:-

- Lantana, Eichhornia, Chromolaena
- Pine, fir, linden
- Teak, sal, red sanders
- Gnetum, Connarus, Derris

44 of 100

208 PU_2016_371_E

Mode of nutrition by killing the host is:-

- Amensalism
- Predation
- Commensalism
- Parasitism

45 of 100

197 PU_2016_371_E

The Hardy-Weinberg law is the basis for which subject:-

- Mendelian genetics
- Niche theory
- Population genetics

- Species-area relationship

46 of 100

177 PU_2016_371_E

Kyoto Protocol is concerned with mitigating

- Terrorism
- Climate change
- Deforestation
- Acid rain

47 of 100

168 PU_2016_371_E

Minimata disease was caused by pollution of water by:-

- Mercury
- Cadmium
- Tin
- Lead

48 of 100

193 PU_2016_371_E

The graph of $y = \sqrt{x}$ is:-

- A straight line that decreases in value with that of x
- A straight line that increases in value with that of x but faster than a straight line
- A straight line that increases in value with that of x
- A straight line that increases in value with that of x but slower than a straight line

49 of 100

169 PU_2016_371_E

Noise is measured with the sound meter and the unit is:-

- Decibel
- Hertz
- Joule
- Watts

50 of 100

185 PU_2016_371_E

The largest mangrove area in India is:-

- Gulf of Mannar
- Sundarbans
- Gulf of Cambay

- Palk Strait

51 of 100

101 PU_2016_371_E

Life originated on earth:-

- 3.8 million years ago
- 4.8 million years ago
- 3.8 billion years ago
- 4.8 billion years ago

52 of 100

218 PU_2016_371_E

The frequency of an allele p in the population is 0.4. What would be the frequency of the allele q:-

- 0.16
- 0.6
- 1
- 0.2

53 of 100

104 PU_2016_371_E

The atmosphere of primitive earth was:-

- Rich in CO₂ and O₂
- Rich in O₂
- Lacked CO₂ and free O₂ was present
- Rich in CO₂ and free O₂ was absent

54 of 100

212 PU_2016_371_E

11th July is celebrated as:-

- World food day
- World population day
- National science day
- World environment day

55 of 100

141 PU_2016_371_E

Excess of water escaping from the plants in a liquid form is called:-

- Osmosis
- Transpiration
- Guttation

- Respiration

56 of 100

105 PU_2016_371_E

Which is the widely accepted theory for origin of life on earth?

- Extraterrestrial origin
- Spontaneous generation
- Chemical evolution
- Special creation

57 of 100

196 PU_2016_371_E

A noise that can cause damage to human being is typically above:-

- 55dB(A)
- 40 dB(A)
- 80 dB(A)
- 120 dB(A)

58 of 100

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Which Phylum in the animal kingdom has the largest number of described species?

- Bacteria
- Cordata
- Cnidaria
- Arthropoda

59 of 100

209 PU_2016_371_E

Global warming is caused by the disruption of:-

- Nitrogen cycle
- Water Cycle
- Hydrogen cycle
- Carbon cycle

60 of 100

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Plant synthesis protein from:-

- Fatty acids
- Sugar
- Amino acids

- Starch

61 of 100

224 PU_2016_371_M

Exponential population growth has a:-

- L shaped curve
- Follows a linear model
- S shaped curve
- J shaped curve

62 of 100

256 PU_2016_371_M

Which of the following play important role in Protein synthesis:-

- E.R
- Mitochondria
- Vacuoles
- Ribosomes

63 of 100

257 PU_2016_371_M

Kappa particles are seen in:-

- Paramecium
- Earthworm
- Euglena
- Trypanosome

64 of 100

249 PU_2016_371_M

Asbestos has been implicated in this cancer:-

- Ovarian cancer
- Mesothelioma
- Leukemia
- Does not cause cancer

65 of 100

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The Indian population increases at an annual growth rate of as per the 2011 census:-

- 1 to 2%
- <1%
- 2 to 3%

- >3%

66 of 100

221 PU_2016_371_M

In mitosis the number of chromosomes in daughter cells is:-

- Double
- Same
- One fourth
- Half

67 of 100

244 PU_2016_371_M

The alternate forms of a gene:-

- Genotype
- Gene
- Allele
- Phenotype

68 of 100

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How does oxygen enter the atmosphere:-

- Through decomposition
- Through transpiration
- Through respiration
- Through photosynthesis

69 of 100

240 PU_2016_371_M

Littoral zone is located along the:-

- Ocean
- Rivers
- Lakes
- Mountains

70 of 100

233 PU_2016_371_M

Which continent is dominated by marsupial mammals:-

- Laurasia
- South America
- Africa

- Australia

71 of 100

220 PU_2016_371_M

A male normal coloured tiger is bred to a female white tiger. Normal coat colour is a dominant trait. Two of the offspring are white and two are normal coloured. What could be the reason:-

- The male is heterozygous for coat colour
- The gene is co-dominant and not dominant
- White coat colour is a sex linked gene
- Both are heterozygous for coat colour.

72 of 100

236 PU_2016_371_M

The main role of soil bacteria:-

- Decomposition
- Synthesize new proteins
- Causing infections to plants
- Biomagnification

73 of 100

252 PU_2016_371_M

Pedology deals with the study of:-

- Aquatic plants
- Water
- Soil
- Air

74 of 100

253 PU_2016_371_M

Ozone hole refers to:-

- Increase in ozone in troposphere
- Decrease in thickness of ozone layer
- Hole in ozone layer
- Decrease in ozone in troposphere

75 of 100

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Which is the animal symbol of the World Wide Fund for Nature (WWF):-

- Penguin
- Tiger

- Red Panda
- Giant Panda

76 of 100

228 PU_2016_371_M

The number of individuals per unit area gives the:-

- The life history attributes
- Density
- Age structure
- Carrying capacity

77 of 100

237 PU_2016_371_M

Energy flow in an ecosystem is:-

- Bidirectional
- Unidirectional
- Multidirectional
- Does not flow in an ecosystem

78 of 100

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Heterozygous is when:-

- Alleles differ in a locus
- Genotype differs
- Metabolic variants
- Phenotype differs

79 of 100

229 PU_2016_371_M

A broad based pyramid shaped age structure indicates:-

- Rapidly growing population
- The cohort effect
- Stable population
- Age structure

80 of 100

241 PU_2016_371_M

Deserts, rain forests, tundra are example of:-

- Communities
- Ecosystems

- Biosphere
- Biomes

81 of 100

269 PU_2016_371_D

3 4/5 expressed as a decimal is:-

- 3.50
- 3.45
- 3.80
- 3.40

82 of 100

285 PU_2016_371_D

Expression of the following number 3.8×10^{-4} without using the power of 10 is:-

- 0.00038
- 38000
- 3800
- 0.00003

83 of 100

293 PU_2016_371_D

In ecology C-3 and C-4 refer to:-

- Rotational symmetry axes of a cubic crystal lattice
- Photosynthetic pathway
- Columns in a liquid Chromatograph
- Isotopes of carbon

84 of 100

276 PU_2016_371_D

Probability sampling is based on the principle of:-

- Random sampling
- Selective sampling
- Nested sampling
- Total sampling

85 of 100

288 PU_2016_371_D

An angle that measures 90° is:-

- A right angle
- A hypotenuse

- An obtuse angle
- A triangle

86 of 100

265 PU_2016_371_D

Development of an Egg without fertilization is termed:-

- Aspermy
- Polyspermy
- Androgenesis
- Parthenogenesis

87 of 100

277 PU_2016_371_D

The method of using samples to estimate population parameters is:-

- Statistical inference
- Statistical distribution
- Statistical application
- Statistical testing

88 of 100

295 PU_2016_371_D

Animals store glucose in the form of:-

- Fructose
- Glycogen
- Amylose
- Sucrose

89 of 100

289 PU_2016_371_D

The arithmetic mean is:-

- Measure of aggregation
- A parameter of dispersion
- A measure of central tendency
- A equality measure

90 of 100

260 PU_2016_371_D

The state where the embryonic development is temporarily arrested:-

- Diapause
- Moulting

- Synchrony
- None

91 of 100

280 PU_2016_371_D

When populations of different species share the environment and interact its known as:-

- Guild
- Population
- Biome
- Community

92 of 100

281 PU_2016_371_D

A phylogenetic relationship can be shown with a:-

- Blast
- Golden path
- Dendrogram
- Phylogram

93 of 100

292 PU_2016_371_D

In a linear model such as $y=ax+b$, the slope is:-

- "b"
- "y"
- "a"
- "x"

94 of 100

273 PU_2016_371_D

Solve: $x - 3 = 5$:-

- 8
- 5
- 3
- 8

95 of 100

261 PU_2016_371_D

Balanced sets of chromosomes are seen in:-

- Aneupoids
- Euploid

- Auto polyploids
- Allopolyploids

96 of 100

296 PU_2016_371_D

What is the scientific name of Humans?

- Homo sapiens
- Homo habilis
- Homo erectus
- Homo neanderthalensis

97 of 100

264 PU_2016_371_D

The excretory organs in silkworms are:-

- Trachea
- Malpighian tubules
- Book lungs
- None

98 of 100

284 PU_2016_371_D

Two strands in a DNA double helix are joined by:-

- Hydrogen bonds between sugars
- Hydrogen bonds between bases
- Phosphodiester bonds between sugars
- Phosphodiester bonds between bases

99 of 100

268 PU_2016_371_D

What is ecdysone?

- Neurotransmitter
- Prokaryotic cell membrane
- Insect moulting hormone
- Plant hormone

100 of 100

272 PU_2016_371_D

A number is divisible by 3 if the sum of its digits is divisible by:-

- 2
- 3

- 1
- 0