# Fossils Practice Test SSSS 2015 KEY

PAGE 1

1. Cover page

PAGE 2

1. Anthozoa; Halysites
2. Examine polished cross section
3. Calcium carbonate

PAGE 3

1. Leptaena
2. Benthic, seafloor sediment
3. Mid-Ordovician through Devonian; throughout North America

PAGE 4

1. Trilobita; Phacops
2. Glabella and eyes
3. Positioned so that it could see in all horizontal directions at once
4. enrolled

PAGE 5

1. Pteridophyta, Calamites
2. Fiddleheads
3. Sporophyte
4. They must fall into water

PAGE 6

1. Gastropoda, Turritella
2. It is still alive today
3. Agate quartz
4. Benthic, aquatic

PAGE 7

1. Mollusca, Bivalvia
2. Pholadomya
3. Sea level change
4. Deep water

PAGE 8

1. Deinonychus

2. Fallen into water and buried by sediments
3. 3

PAGE 9

1. Sphenacodontidae
2. Sexual display, thermoregulation
3. Early Permian

PAGE 10

1. Stromatolite
2. Stromatolites provide ancient records of life on Earth by fossil remains which might date from more than 3.5 billion years ago.
3. layered bio-chemical accretionary structures formed in shallow water by the trapping, binding and cementation of sedimentary grains by biofilms (microbial mats) of microorganisms, especially cyanobacteria.
4. conical, stratiform, branching, domal, and columnar types

PAGE 11

1. Batoidea
2. Most batoids have developed heavy, rounded teeth for crushing the shells of bottom-dwelling species such as snails, clams, oysters, crustaceans, and some fish, depending on the species.
3. Just name some rays etc

PAGE 12

1. An endocast or *internal mold* is formed when sediments or minerals fill the internal cavity of an organism, such as the inside of a bivalve or snail or the hollow of a skull.
2. Bioimmuration occurs when a skeletal organism overgrows or otherwise subsumes another organism, preserving the latter, or an impression of it, within the skeleton.
3. The impressions created in bioimmuration can be considered endocasts.

PAGE 13

1. Cephalon
2. Thorax
3. Pygidium
4. Left pleural lobe

5. Axial lobe
6. Right pleural lobe

PAGE 14

1. Porifera, Hydnoceras
2. 24-isopropylcholestane
3. Marinoan
4. Choanoflagellates

PAGE 15

1. Bothriolepis
2. Detritovore, scavenging sediment
3. *Bothriolepis* is presumed to have spent most of its life in freshwater rivers and lakes, but was probably able to enter salt water as well because its range appeared to have corresponded with the Devonian continental coastlines.
4. True

PAGE 16

1. 75 cm (30 in), Their large size can be attributed to the moistness of the environment (mostly swampy fern forests) and the fact that the oxygen concentration in the Earth's atmosphere in the Carboniferous was much higher than today.
2. Carboniferous
3. Arthropleura
4. Many insects have been obtained from the coalfields of Saarbrucken and Commentary, and from the hollow trunks of fossil trees in Nova Scotia. Answers may vary.

PAGE 17

1. Ludfordian; 425-423 mya
2. Wenlock
3. Telychian; 438-433 mya
4. Llandovery
5. Katian
6. Sandbian
7. Darriwilian; 467-458 mya
8. Floian

PAGE 18

1. Cephalopoda, Dactylioceras
2. 172
3. Scavenging on sea floor
4. the genus *Dactylioceras* is extremely important in biostratigraphy, being a key index fossil for identifying their region of the Jurassic.

PAGE 19

1. Three major types of suture patterns are found in the Ammonoidea:

   **Goniatitic** - numerous undivided lobes and saddles; typically 8 lobes around the conch. This pattern is characteristic of the Paleozoic ammonoids.

   **Ceratitic** - lobes have subdivided tips, giving them a saw-toothed appearance, and rounded undivided saddles. This suture pattern is characteristic of Triassic ammonoids and appears again in the Cretaceous "pseudoceratites".

   **Ammonitic** - lobes and saddles are much subdivided (fluted); subdivisions are usually rounded instead of saw-toothed. Ammonoids of this type are the most important species from a biostratigraphical point of view. This suture type is characteristic of Jurassic and Cretaceous ammonoids, but extends back all the way to the Permian.

2. The siphuncle in most ammonoids by far is a narrow tubular structure that runs along the outer rim, known as the venter, connecting the chambers of the phragmocone to the body or living chamber. This distinguishes them from living nautiloides

PAGE 20

1. Osteichthyes
2. Bony fishes
3. Guiyu oneiros

PAGE 21

1. Hyracotherium
2. Horses
3. 3; odd
4. Family Equidae

5. Palaeothere

PAGE 22

1. Turritella
2. Coquina
3. high-energy marine and lacustrine environments where currents and waves result in the vigorous winnowing, abrasion, fracturing, and sorting of the shells, which compose them

PAGE 23

1. Parasaurolophus
2. Visual recognition of both species and sex, acoustic resonance, and thermoregulation have been proposed as functional explanations for the crest.
3. F
4. There is fossil evidence to strongly suggest that hadrosaurid dinosaurs like *Parasaurolophus* were prey to the top predators of the Campanian, principally the tyrannosaurs. In the north around Canada and northern portions of the USA the main genera that could have posed a serious threat to adult *Parasaurolophus* would have been*Albertosaurus*, *Gorgosaurus* and *Daspletosaurus*.

PAGE 24

1. Stegosaurus
2. Row of plates on back; spiked tail
3. Thagomizer
4. Morrison Formation

PAGE 25

1. IV, III, II, V, I