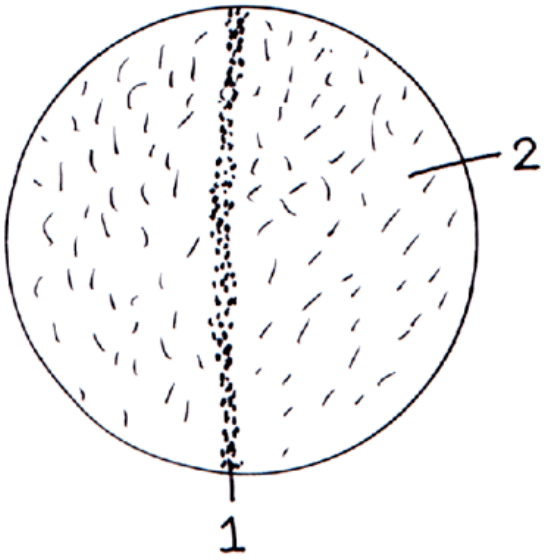
STATION 1 – Examine the Petri dish and the picture below that represents it.



From which region (designated with a number) was each slide made?

Slide A ____, Slide B ____, Slide C ____

Draw the reproductive structures in Slides B and C and label with the following terms (not all terms apply; wrong answers will be penalized. Indicate the ploidy of all labels.
Terms: coenozygote, gametangium, progametangium, columella, mitospore, meiospore, sporangiophore.

SLIDE B	SLIDE C

Circle the terms that apply to the organism (wrong answer will be penalized):

Ascomycota, Basidiomycota, Chytridiomycota, Myxomycota, Oomycota, Zygomycota, ascus, basidia, zygosporangium, zygotic meiosis, gametic meiosis, sporic meiosis.

Is this organism homothallic or heterothallic? Explain your answer.

STATION 2

I. Complete the chart below.

	Organism A	**Organism B**
Phylum		
Give reasons for classifying the organism into the phylum.		
Name the motile stages of each organism?		
Compare and contrast nutrient assimilation between the two organisms.		

II. Draw the structures observed under the compound microscope for Organism A and label with the terms indicated below. (Not al terms apply; wrong answers will be penalized.) Indicate the ploidy of all structures labeled.

Labels: antheridium, ascogonium, ascus, basidium, cleistothcium, conidium, conidiophore, oogonium, sporangium, zoospore, , oospore

STATION 3 – Examine Organism A and Organism B.

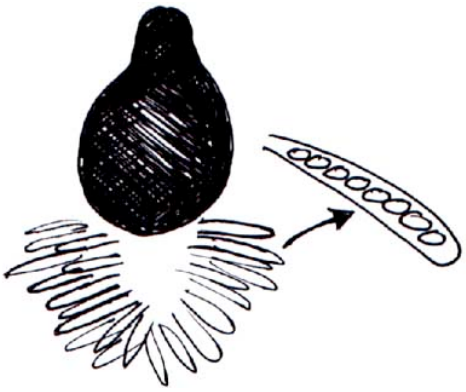
	ORGANISM A	ORGANISM B
PHYLUM: SUBPHYLUM OR CLASS:	_____ _____	_____ _____
Give reasons the organisms are classified in the phylum.		
Explain nutrient assimilation for each organism.		
Sketch what you see on the slide. Label each drawing with the following terms (not all apply; wrong labels will be penalized): accus, basidium zygospore, conidiophore, paraphyses, meiospores, mitospore, Indicate the sites of plasmogamy, karyogamy, and meiosis if present. Explain what the spores germinate to become.		.
At what stages and where in the life history does the dikaryotic phase of each organism occur?		

STATION 4 – Examine the two different examples of symbioses.

	SYMBIOSIS A	SYMBIOSIS B
Name the non-fungal symbiont in each interaction.		
Underline the terms that apply to each of the symbioses. Wrong answers will be penalized.	commensalistic symbiosis, mutualistic symbiosis, parasitic symbiosis, lichen, endomycorrhizae, ectomycorrhizae	commensalistic symbiosis, mutualistic symbiosis, parasitic symbiosis, lichen, endomycorrhizae, ectomycorrhizae
To what phylum does the fungal symbiont most likely belong?		
Explain how each symbiont impacts the other in terms of harm and/or benefit.		
Explain how nutrients are assimilated by the fungal symbiont in each symbiosis.		.

STATION 5

I. Fill out the chart below.

	Organism A	**Organism B**
Phylum:		
Label the diagrams (on a real exam I would give you terms). Indicate the ploidy of all structures labeled.		
Name the type of fruiting body if present.		
What do the spores germinate into?		
Compare and contrast spore production in each of these organisms (restrict to our answers to the types of spores demonstrated in the slides.		

II. At what stage in the life history of **Organism A** are nutrients assimilated? Explain how Organism A assimilates nutrients.