Write the letter of the correct answer on the answer sheet that I've sent to you by e-mail. Make sure you see all the questions. This quiz is longer than the usual two pages.

** 1. True or false. The word schizophrenia literally means "split mind". This often leads people to confuse schizophrenia with multiple personality disorder. In fact, schizophrenia bears little resemblance to multiple personality disorder, and the schizophrenic person's mind is not "split" into two (or more) personalities.

** 2. Which of the following is a positive symptom of schizophrenia?
A. delusions  
B. hallucinations  
C. difficulty with attention and concentration  
D. both A and B, but not C, are correct

** 3. Schizophrenic individuals have great difficulty arranging their thoughts logically and sorting out plausible conclusions from absurd ones. In conversations they jump from one topic to another as new associations come up. Sometimes they utter meaningless words or choose words for rhyme rather than for meaning. This symptom of schizophrenia is called:
A. psychotic aphasia  
B. anhedonia  
C. thought disorder  
D. catatonia

** 4. Negative and cognitive symptoms are not specific to schizophrenia; they are seen in many neurological disorders that involve brain damage, especially to the __________ lobes.
A. frontal  
B. parietal  
C. occipital  
D. temporal

** 5. There is a running battle on the Internet among specialists in psychiatry (who should really know better!) about how common schizophrenia is. The National Institute of Mental Health says about 0.3% of people in the U.S. are currently diagnosed with schizophrenia. That would be about a million people. Others say about 0.7% of people are currently diagnosed (2.2 million people). An article in the Psychiatric Times online criticized these statistics, saying, "A schizophrenia prevalence in the United States of 1% is a foundation fact that has wide implications." What mistake did the Psychiatric Times author make?
A. mistook incidence for prevalence  
B. mistook risk for prevalence  
C. gave the prevalence of all psychotic disorders  
D. no mistake, 1% is the correct prevalence

** 6. First diagnosis for schizophrenia most commonly occurs during:
A. adolescence or young adulthood  
B. young adulthood to middle age  
C. middle age to old age  
D. old age (over the age of 65)

** 7. The first drug used successfully in the treatment of schizophrenia was:
A. chlorpromazine  
B. clozapine  
C. l-dopa  
D. none of the above

** 8. If a monozygotic twin is diagnosed with schizophrenia, the chance is about 48% that his cotwin will also be diagnosed. If a dizygotic twin is diagnosed with schizophrenia, the chance that his cotwin will also be diagnosed is about 17%. This implies that:
A. schizophrenia is caused by a single dominant gene  
B. schizophrenia is caused by a single recessive gene which both parents must pass on  
C. schizophrenia is caused by two dominant genes, one from the father, one from the mother  
D. none of the above; just that schizophrenia is heritable (there are genetic risk factors)
9. The methylation theory of schizophrenia:
   A. says that neurotransmitters such as serotonin are similar in structure to drugs like DMT
   B. says that schizophrenics make hallucinogenic substances such as DMT in their brains
   C. is not well supported by the scientific evidence
   D. all of the above are correct

10. A drug can have many actions in the brain, but all of the drugs that have been found useful in the treatment of positive symptoms of schizophrenia have one action in common. What?
   A. block serotonin receptors
   B. block dopamine receptors
   C. increase the activity of dopamine
   D. increase the activity of serotonin

11. Atypical antipsychotic drugs, such as aripiprazole:
   A. reduce both the positive but and the negative symptoms of schizophrenia
   B. don't cause the Parkinsonian side effects caused by older drugs like chlorpromazine
   C. don't block amphetamine-induced stereotypy in rats
   D. all of the above are correct

12. True or false. The dose of an antipsychotic drug needed to alleviate the symptoms of schizophrenia is strongly correlated with the drug's ability to occupy dopamine receptors (receptor affinity) in the brain. The better the drug binds to the receptors, the lower the dose necessary to be effective. This is very strong evidence that the therapeutic effect of these drugs is occurring because they bind to dopamine receptors.

13. Side effects of atypical antipsychotic drugs such as clozapine include:
   A. tremor
   B. dizziness, chest pain, pounding heart
   C. kidney damage
   D. all of the above are correct

14. True or False. During late adolescence there is a general loss of cells and synapses from the cerebral cortex as the brain undergoes a final stage of development called pruning. Scans have shown that this does not occur in adolescents diagnosed or soon to be diagnosed with schizophrenia.

15. The Wisconsin Card Sort Test, with which schizophrenic patients typically have difficulty, can be used to indicate deficient functioning in what area of the brain?
   A. temporal cortex
   B. limbic system
   C. prefrontal cortex
   D. thalamus

16. Schizophrenia, particularly the negative symptoms, has been related to a syndrome called hypofrontality, in which an area of the frontal cortex degenerates or is not functioning properly. What area of frontal cortex is under suspicion?
   A. motor cortex
   B. orbitofrontal cortex
   C. dorsolateral prefrontal cortex
   D. subgenual anterior cingulate cortex

17. A syndrome resembling the negative symptoms of schizophrenia can be caused by chronic abuse of what drugs?
   A. ketamine and PCP
   B. amphetamine and cocaine
   C. opioids
   D. nicotine and caffeine
18. True or False. Glutamate (glutamine) neurons are the primary output neurons of the cerebral cortex. In the "new dopamine theory," the primary disease process in schizophrenia is now thought to be in these neurons.

19. What is the current state of the evidence suggesting that we can make hallucinogenic compounds such as DMT in our brains?
   A. poor
   B. good
   C. very good
   D. outstanding, in fact, this has recently been proven

20. In addition to acting at dopamine receptors, atypical antipsychotic drugs almost certainly have an additional therapeutic effect by acting at synapses that use what neurotransmitter?
   A. acetylcholine
   B. endorphins
   C. serotonin
   D. glutamate