

## Psych 3JJ3 Midterm 1 Answer Key

### Multiple Choice

1. A
2. A
3. B
4. D
5. D
6. D
7. D
8. C
9. D
10. D
11. D
12. B
13. D
14. A
15. D
16. C
17. D
18. D
19. C
20. C

### Short Answer

21. Any three of the following points:
  - Can vary from good to bad
  - Can be stable
  - Can change and be dynamic
  - Can be conceptually as well as empirically orthogonal to some biological susceptibility factors
  - Can create and shape one's own internal and external environment
  
22. Dependent measures = CBCL internalizing and externalizing scores  
Most risky combination = 5HTT short + DRD4 long  
Least risky combination = 5HTT long + DRD4 long
  
23. a) The description of differential susceptibility must include the following points:
  - The two independent variables:
    - Environmental quality (e.g., high versus low stress/parenting sensitivity, etc.)

- The biological susceptibility factor (e.g., gene alleles, high versus low temperamental reactivity, etc.). The biological factors are associated with different levels of phenotypic plasticity.
- The outcome measure (this is how we observe differential susceptibility (e.g., CBCL scores, injury incidence, etc.))
- The pattern of results for the “orchid” and “dandelion” groups:
  - Dandelions are relatively insensitive to the influence of environmental quality and show the same outcome in both environments (relative to orchids, see below).
  - Orchids are highly susceptible to environment influence and this plays out in a “for better and for worse” fashion: In high quality environments, the orchids show the highest/most “positive” outcomes, scoring higher than the dandelions (i.e., for better), and in low quality environments, the orchids show the lowest/most “negative” outcomes, scoring lower than the dandelions (i.e., for worse).

b) Exogenous: Describe the IVs and the DV and how the findings correspond to the differential susceptibility pattern described above. Any one of the following studies accepted:

- One of the two Boyce et al. studies
- The Bakermans-Kranenburg & Van IJzendoorn study

c) Endogenous: Describe the Schmidt et al. gene by endo-environment interaction study with the same detail as mentioned for 23b)

24. a) the concept being illustrated was equifinality

b) the predictor variables in Poole et al. (2018) were birth status – ELBW with prenatal steroid exposure, ELBW without prenatal steroid exposure, and normal birth weight. The outcome variable was shyness. Equifinality was illustrated between the two ELBW groups, those exposed to prenatal steroids started with high levels of shyness and remained fairly stable throughout life while those not exposed to prenatal steroids started with low levels of shyness but showed an increase in shyness over their lifetime, reaching approximately the same levels of shyness as those exposed by age 30. The two groups had different starting points in terms of levels of shyness but converged to a similar outcome.

25. Any 2 of the following:

- Both the high shy/high sociable and the high shy/low sociable groups display right frontal asymmetry
- Both the high shy/high sociable and the high shy/low sociable groups have similar absolute levels of right frontal activity
- The 2 groups differ on the absolute level of left frontal activity: The high shy/high sociable group has a higher level of left activity than the level of left activity in the high shy/low sociable group