



JURONG JUNIOR COLLEGE

JC 2 Preliminary Examination 2010

CANDIDATE NAME

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Class

General Certificate of Education

GENERAL PAPER

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Paper 2

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INSERT

1 hour 30 minutes

READ THESE INSTRUCTIONS FIRST

This insert contains the passage for Paper 2.

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JOANN RODGERS writes about **addiction**.

- 1 Our addiction theories and policies are woefully outdated. Research shows that there are no demon drugs. Nor are addicts innately defective. Nature has supplied us all with the ability to become hooked—and we all engage in addictive behaviors to some degree.
- 2 Millions of Americans are apparently "hooked," not only on heroin, morphine, amphetamines, tranquilizers, and cocaine, but also nicotine, caffeine, sugar, steroids, work, theft, gambling, exercise, and even love and sex. The War on Drugs alone is older than the century. In the early 1990s, the United States spent \$45 billion waging it, with no end in sight, despite every kind of addiction treatment from psychosurgery, psychoanalysis, psychedelics, and self-help to acupuncture, group confrontation, family therapy, hypnosis, meditation, education and tough love.
- 3 There seems no end to our dependencies, their bewildering intractability, the glib explanations for their causes and even more glib solutions. The news, however, is that brain, mind, and behavior specialists are re-thinking the whole notion of addiction. With help from neuroscience, molecular biology, pharmacology, psychology, and genetics, they're challenging their own hardcore assumptions and popular "certainties" and finding surprisingly common characteristics among addictions.
- 4 They're using new imaging techniques to see how addiction looks and feels and where cravings "live" in the brain and mind. They're concluding that things are far from hopeless and they are rapidly replacing conjecture with facts.
- 5 For example, scientists have learned that every animal, from the ancient hagfish to reptiles, rodents, and humans, share the same basic pleasure and "reward" circuits in the brain, circuits that all turn on when in contact with addictive substances or during pleasurable acts such as eating. One conclusion from this evidence is that addictive behaviors are normal, a natural part of our "wiring." If they weren't, or if they were rare, nature would not have let the capacity to be addicted evolve, survive, and stick around in every living creature. Everyone engages in addictive behaviors to some extent because such things as eating, drinking, and sex are essential to survival and highly reinforcing. We get immediate gratification from them and find them very hard to give up. The inescapable fact is that nature gave us the ability to become hooked because the brain has evolved a reward system, just as it has a pain system. The fact that some things may accidentally or inadvertently trigger that system is somewhat beside the point.
- 6 What we now call "addictions," in this sense, are cases of a good and useful phenomenon taken hostage, with terrible social and medical consequences. Moreover, that insight is leading to the identification of specific areas of the brain that link feelings and behavior to reward circuits. In the case of addictive drugs, we know that areas of the brain involved in memory and learning and with the most ancient part of our brain, the emotional brain, are the most interesting.
- 7 The new concept of addiction is in sharp contrast to the conventional, frustrating, and some would say cynical view that everything causes addiction. Ask 10 Americans what addiction is and what causes it and you might get at least 10 answers. Some will insist addiction is a failure of morality or a spiritual weakness, a sin and a crime by people who won't take responsibility for their behavior. If addicts want to self-destruct, let them. It's their fault; they choose to abuse.

- 8 For the teetotaler and politicians, it's a self-control problem; for sociologists, poverty; for educators, ignorance. Ask some psychiatrists or psychologists and you're told that personality traits, temperament, and "character" are at the root of addictive "personalities." Social-learning and cognitive-behavior theorists will tell you it's a case of conditioned response and intended or unintended reinforcement of inappropriate behaviors. The biologically oriented will say it's all in the genes and heredity; anthropologists that it's culturally determined. And Dan Quayle will blame it on the breakdown of family values. 50

- 9 The most popular "theory," however, is that addictive behaviors are diseases. In this view, an addict, like a cancer patient or a diabetic, either has it or does not have it. Popularized by Alcoholics Anonymous, the disease theory holds that addictions are irreversible, constitutional, and altogether abnormal and that the only appropriate treatment is total avoidance of the alcohol or other substance, lifelong abstinence, and constant vigilance. 55

- 10 The problem with all of these theories and models is that they lead to control measures doomed to failure by mixing up the process of addiction with its impact. Worse, from the scientific standpoint, they don't hold up to the tests of observation, time, and consistent utility. They don't explain much and they don't account for a lot. 60

- 11 While all addictions display common properties, the proportions of those factors vary widely. And certainly not all addictions have the same effect on the quality of our lives or capacity to be dangerous. Everyday bad habits, compulsions, dependencies, and cravings have something in common with heroin and cocaine addiction, in terms of their mechanisms and triggers. But what about people who are Type A personalities; who eat chocolate every day; who, like Microsoft's Bill Gates, focus almost pathologically on work; who feel compelled to expose themselves in public, seek thrills like racecar driving and fire fighting, or obsess constantly over hand washing, hair twirling, or playing video games. They have — from the standpoint of what their behavior actually means to themselves and others — very little in common with heroin and crack addicts. 65
70

- 12 Or consider two of the more fascinating candidates for addiction—sex and love. In the case of love, the reactions involve chemicals such as endorphins, a naturally occurring hormone linked to male and female bonding. After a while, though, this effect diminishes as the brain's receptor sites for these chemicals become overloaded and thus desensitized. Tolerance occurs; attachment wanes and sets up the mind for separation, so that the "addicted" man or woman is ready to pursue the high elsewhere. In this scenario, divorce or adultery becomes the equivalent of drug-seeking behavior, addicts craving for the high. The fact that most people stay married is "a triumph of culture over nature," much the way, perhaps, non-addiction is. 75
80

- 13 If addictions have characteristics in common, so do addicts, the experts say. They have particular vulnerabilities or susceptibilities, opportunity to have contact with the substance or activity that will addict them, and a risk of relapse no matter how successfully they are treated. They tend to be risk takers and thrill seekers and expect to have a positive reaction to their substance of abuse before they use it. 85

- 14 Addicts have distinct preferences for one substance over another and for how they use the substance of abuse. They have problems with self-regulation and impulse control, tend to use drugs as a substitute for coping strategies in dealing with both stress and their everyday lives in general, and don't seek "escape" so much as a way to manage their lives. Finally, addicts tend to have higher-than-normal capacity for such drugs. Alcoholics, for example, often can drink friends "under the table" and appear somewhat normal, even drive (not safely) on doses of alcohol that would put most people to sleep or kill them. 90
95

- 15** The biological, psychological, and social process by which addictions occur also have common pathways, but with complicated loops and detours. All addictions appear now to have roots in genetic susceptibilities and biological traits. But like all human and animal behaviors, including eating, sleeping, and learning, addictive behavior takes a lot of handling. The end product is a bit like Mozart's talent: If he'd never come in contact with a piano or with music, it's unlikely he would have expressed his musical gifts. 100