

C88-2017  
GSA

**PART-II**  
**SECTION-I**

Question no. 3:

Answer: Heart Attack <sup>(A)</sup>

Definition: Heart attack is a severe heart disease that mainly occurs when the blood supply to the heart is suddenly interrupted.

Biological Name: Its biological name is myocardial infarction.

Factor Causing Heart Attack: Heart attacks are caused by the sudden interruption of blood supply to the heart. As a result, heart muscles may be damaged and begin to die.

Cardiac Arrest: At the time when a large portion of the heart is damaged, the heart stops beating (known as cardiac arrest), resulting in death.

Causes of Heart Attack:

(i) Genetic Cause: There is increased probability of heart attack risks in a person with family history (genetic) of heart diseases. Some

people are born with heart diseases which can cause a heart attack if not treated on time.

(ii) Smoking: Smoking increases heart attack risks and the tendency for blood clotting. Acrolein - a chemical found in cigarettes - leads to the build-up of a waxy plaque in the arteries. At the narrower sites, the arteries get narrower and constrict the blood supply to the heart. Consequently, the heart muscles begin to starve, which eventually leads to a heart attack.

(iii) High Cholesterol: A high level of cholesterol in the blood leads to the build-up of a waxy substance called plaque in the arteries in a process called atherosclerosis, wherein the arteries get narrower, constricting blood supply to the heart and causing a heart attack.

(iv) Obesity: Being obese contributes to the risk of heart attack. The heart has to beat with more force to pump blood through

veins causing hypertension (high blood pressure). This eventually weakens the heart because it cannot continuously pump hard against the pressure in blood vessels, which causes a heart attack.

(v) Drug Misuse: Drugs like cocaine, heroin and alcohol interfere with the normal functioning of the heart by causing abnormal heartbeat and by interrupting blood circulation. A large quantity of these drugs always results in a heart attack.

(vi) Lack of Oxygen (Hypoxia): If the level of  $O_2$  in the blood decreases due to  $CO_2$  poisoning or suffocation, the heart will receive un-oxygenated blood. This will damage a large portion of the heart and trigger a heart attack.

Answer: Difference (B) between Drug Addiction and Drug Abuse:

Drug Addiction	Drug Abuse
<p>* Drug addiction is a disease that alters a person's brain and behaviour wherein they are unable to stop using legal or illegal drugs.</p>	<p>* Drug abuse involves using legal or illegal drugs in ways that you should not.</p>
<p>* Someone struggling with drug addiction may continue using drugs despite being aware of its negative consequences.</p>	<p>* A person may take more than recommended dose of drug or use someone else's prescription pills.</p>
<p>* Frequent drug use can cause changes in one's brain, impacting self-control and interfering with their ability to resist urges.</p>	<p>* The worst consequence of drug abuse is its ability to develop into drug dependency or drug addiction.</p>
<p>* The physical signs of drug addiction include</p> <ol style="list-style-type: none"><li>Weight loss or weight gain,</li><li>Irregular sleeping patterns,</li><li>Tremor or seizures,</li><li>Loss of physical coordination.</li></ol>	<p>* The physical signs of drug abuse include</p> <ol style="list-style-type: none"><li>Nausea,</li><li>Poor hygiene,</li><li>Irregular heartbeat,</li><li>Running nose,</li><li>Sleep problems.</li></ol>
<p>* The behavioural signs of drug addiction include</p> <ol style="list-style-type: none"><li>Self-isolation,</li><li>Financial and legal issues</li></ol>	<p>* The behavioural signs of drug abuse include</p> <ol style="list-style-type: none"><li>Paranoia/irritability,</li><li>Stealing money or items,</li></ol>

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### Drug Addiction

(iii) Secretive behaviour,  
(iv) Repeated dishonesty,  
\* Withdrawal symptoms are  
the major signs of  
addiction.  
\* It is associated  
with physical dependence.  
\* Drug use in  
drug addiction is  
chronic.

### Drug Abuse

(iii) Lack of motivation,  
(iv) Sudden over sensibility,  
\* It is not associated  
with withdrawal  
symptoms.  
\* It is associated with  
psychological dependence.  
\* Drug use in drug  
abuse is recreational  
or (casual) casual.