

	*	www.pako	city.org		Class 10 th	: Biology Notes	
[] 							
17.	Stre	ptomycin drugs ol	otained from:				
		Plants	Fungi	(c)	Bacteria	(D) Animals	
18			Laboratory are called:				
	(A)	-	B Animals made	_	Plants made	Synthetic	
10	Whi		ive drugs are also used			- Symmetre	••••••
1 7.	\sim		Sedatives	(c)	All can be used	Narcotics	
20	***************************************					Trancotics	
20.	\sim	Inhibit protein sy	acteria in the following Inthesis	g way B		sis of new cell wall	
		Stop the synthesi		Ō	Break the cell w		
21.	Med	licines which indu	ce sedation by reducir	ng irr	itability and excit	ement are called:	
	A	antibiotics	® vaccines	©	sedatives	② analgesics	
22.	Anti	biotics inhibit or k	kill the:				
	A	Yeast	[®] Viruses	©	Worms	Bacteria	
23.	Med	licines which kill o	r stop the growth of b	acter	ia are called:		
	A	antibiotics	antibodies	©	antinarcotics	analgesic	
24.	Diaz	epam is a type of	drug:				
	A	Sedatives	B vaccines	©	Antibiotics	O Analgesics	
25.	Red	uce the possibility	of infection on skin:				
	- = =	Digitalis	B Antiseptics	©	Antibiotics	Disinfectants	
26.	Flen	nming discovered	the:				
	A	ı	® cephalosporin	©	Aspirin	① Tetracycline	
27	Who		ea of sterile surgery fo	***************************************	first time:		
		_	Joseph Lister	_	Thomas Grill	Sir Alexander	
28.	Peni	icillin was discove					••••••
		Robert Hook		©	Darwin	Alexander Fleming	ng
29	<u> </u>		ed an acid to sterile th	ie siir			
	(A)		Nitric acid	825	Carbonic acid		.
30	It af		on of sperms in men a				•••••
		psilocin	B caffeine	$\overline{}$	morphine		
21		<u></u>					
31.		Fungi	drug morphine is obt Opium	amec	Fish liver	foxglove leaves	į
2.2				<u> </u>	1 1311 11 VC1	o longiove leaves	••••••
32.	_	ucinogens effect o hypothalamus	n tne:	(B)	spinal card		- 50
		Sympathetic nerv	ous system	<u>(b)</u>	central nervous	s system pakcity.org	9 🐉
33.	Whi	ch of the following	g addictive drugs is ob	taine	d from opium:		
	A	Psilocin	Mescaline	©	Morphine	Marijuana	
34.	Drus	gs interact with Ce	entral Nervous system	to de	press its activitie	s belong to the group	of
		gs called:				GF	
	A	Vaccines	Sedatives	©	Narcotics	O Analgesics	······································

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35.	The pain reliever morphine is obtained from the flowers of which plant?						
		foxglove	rose	©	brassica	opium	
36.			ed date are hazardous	to:			
	A	kidneys	® stomach	©	lungs	D heart	
37.	Edw	ard Jenner introd	uces vaccine of which	disea	ase?		
	A	malaria	[®] hepatitis	0	aids	smallpox	
38.	Whi	ch of the following	g diseases is cured by	vacci	nes:		
	A	Typhoid	Measels	©	cholera	Aids	
39.	Mes	caline is obtained	from a plant:				
	A	Morning Glory	B Cannabis	©	Datura	© Cactus	
40.	Is ar	n Analgesic:					
	A	Aspirin	B Both A & C	©	Paracetamol	Diazepam	
41.	Sir A	Alexander Fleming	g was awarded the Nol	ole Pi	rize in:		
	A	1950	® 1940	©	1935	① 1945	
42.	The	cardiotonic know	n as digitalis is obtain	ed fro	om a plant:		
	A	memosa	fox glove	©	Brassica	accacia	
43.	This	group includes m	nescaline and psilocin:	pt 60			
	A	narcotics	B hallucinogans	0	sedatives	vaccines	
44.	Psilo	ocin is obtained fr	om:				
	A	cactus	® opium	<u></u> ©	mushroom	© cannabis	
45.		•	organisms found on n		0 ,		
	A	Antibiotics	B Disinfectants	<u>©</u>	Antiseptics	O Antibodies	
46.		ch drug is obtaine					
		Streptomycin	······································	<u>©</u>	Paracetamol	O Aspirin	
47.		ch drugs include a	TT6		Addictive desce-		
		Drugs from plant Synthetic drugs	.5	(B)	Addictive drugs Drugs from bacte	eria	
48.		ch of these is a Ba	ctericidal Drug:				organia
	N=2		B Cephalosporin	©	Mescaline	Morphin	***************************************
49.	An a	ntibiotic is a drug	that kills: 🍇 pakcit	y.org			
	A	Bacteria	Fungi	©	Algae	D Viruses	
50.		are the most fre	quently prescribed me	edica	tions in modern m	edicine:	
	A	enzymes	antibiotics	©	antigens	vaccines	
51.	The	most common me	ethod of administering	vaco	ines is by:		
	A	Injection	Skin	©	Nasal Spray	Mouth	
52.	Whi	ch one of the follo	wing is not an addictiv	ve dr	ug?		
	A	Codeine	Tetracycline	0	Morphine	Sedatives	

Q3:

Differentiate between Pharmaceutical drug or medicinal drug and addictive drugs.

Addictive drugs

Differentiate between Pharmaceutical drug or medicinal drug and addictive drugs is:

Pharmaceutical drug

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It is defined as any chemical substance used in the diagnosis, cure, treatment or prevention of disease.

Some drugs often make person dependent on them or addicted. These may be called as addictive drugs.

Write the names of drugs obtained from plants and fungi. This diagram is just for information.

Ans: Many important medicines are obtained from plants and fungi. These medicines include antibiotics, cardiotonics and certain analgesics. The antibiotic penicillin comes from fungus.

Define pharmacology and pharmacologist. *Q5:*

Ans: **Pharmacology:**

Pharmacology is the study of drug composition properties and medical applications.

Pharmacologist:

The scientist who study and work on pharmacology is called Pharmacologist.

Give details of drugs obtained from animals. *Q6:*

Ans: Drugs obtained from animals are usually their glandular products. Fish liver oils, musk, bees, wax, certain hormones and antitoxins are obtained from animal sources.



Digitalis (foxglove) **Figure**

Q7: From which morphine is obtained?

The pain reliever morphine is made from opium, which Ans: comes from the juice of opium poppy plant.

What is meant by drugs? Q8:

Drugs: Ans:

> Any substance that when absorbed into the body of living organisms, alters normal body function is known as drug. Drugs are broadly classified into two types.

- Pharmaceutical drug *
- *Addictive drugs*

What is iodine tincture? Write its use.

The mineral iodine is used in making tincture of iodine, a liquid that helps prevent infection when applied to cuts and bruises.

Q10: What is use of powder silver nitrate?

Ans: **Powder silver nitrate:**

Powder of silver nitrate applied on wounds to stop bleeding & prevent infection.

Q11: Write names of two drugs obtained from minerals.

Ans: Drugs obtained from minerals.

- The powder form of silver nitrate.
- Mineral Iodine.

Q12: What are Synthetic Drugs?

Ans: **Synthetic Drugs:**

Such drugs do not occur naturally but are synthesized in laboratories. Pharmaceutical companies produce these drugs.

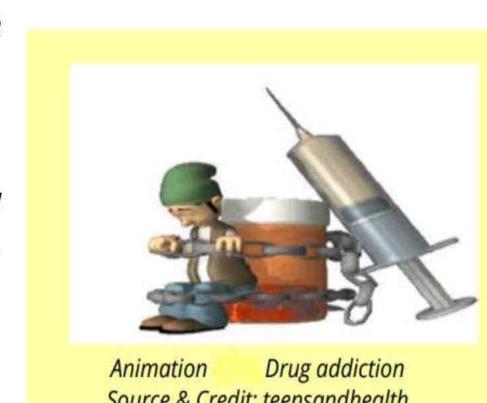
For example:

* Aspirin.

What is difference between antibiotics and disinfectants?

The difference between antibiotics and disinfectants is:

Antibiotics	Disinfectants	
Antibiotic inhibit or kill bacteria and	Disinfectant destroys micro-organism found	
treat bacterial infection e.g. tetracycline,	on non-living objects.	





cephalosporin etc.

Q14: Define antibiotics.

Ans: Antibiotic inhibits or kills bacteria and treats bacterial infection.

For example:

* Tetracycline, cephalosporin etc.

Q15: Define analgesic.

Ans: Analgesic:

Analgesics (painkillers) reduce pain e.g. aspirin, paracetamol etc. Antibiotics inhibit or kill bacteria and treat bacterial infections.

For example:

Tetracycline, cephalosporin etc.

Q16: Define antiseptics.

Ans: **Antiseptics:**

It reduces the possibility of infections on skin.

Q17: Describe two precautions before taking medicine.

Ans: Two precautions before taking medicine:

Always keep healthcare products out of the reach of the children.

Do not take medicine in the dark.

Q18: Define hallucinogens.

Ans: **Hallucinogens.**

Hallucinogens are the drugs that cause changes in perception, thoughts, emotions and consciousness. The group includes mescaline which comes from cactus and psilocin which comes from mushrooms.

Q19: Name two Narcotics obtained from opium.

Ans: Morphine and codeine are the narcotics, derived from opium.

Q20: What is Narcotics?

Ans: Narcotics:

Narcotics are strong painkiller. These drugs are often prescribed in conjunction with other less potent painkiller.

For example:

Heroin, morphine etc.

Q21: What are the uses of Narcotics?

Ans: The uses of Narcotics:

Narcotics are used to relieve pain for patients with chronic disease such as cancer. These are also used to relieve acute pain after operation.

This diagram is just for information.





Figure The fruits of the opium poppy plant

Q22: Explain morphine and codeine.

Ans: Morphine and codeine:

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Morphine and codeine are the narcotics, derived from opium (poppy). Morphine acts directly on central nervous system to relieve pain. Morphine has high potential for addiction the most common abused narcotic i.e heroin is a semi synthetic drug from morphine. It effects on CNS and cause drowsiness.

Q23: Write the uses of diamorphine.

Ans: The uses of diamorphine:

Its use includes treatment for acute pain, such as in severe physical trauma, myocardial infarction, post-surgical pain etc.

Q24: What is Heroin? Give its bad effect.

Ans: **Heroin:**

The most commonly abused narcotic i.e. heroin is a semi-synthetic drug from morphine.

Bad effect:

It effects on central nervous system and causes drowsiness.

Q25: What are prescription drugs?

Ans: **Prescription drugs:**

Prescription drugs are sold only on physician's prescription. These include barbiturates, tranquillizers, antibiotics etc.

Q26: Write some problems in drug addiction.

Ans: Problems in drug addiction:

Drug abusers go through withdrawal of social contact or communication. The compulsion for narcotic drugs makes every drug addict a law violator and á criminal. Most narcotics addicts get involved in various types of crimes. Drug addicts are very weak in their social behavior.

Q27: Write difference between antigens and antibodies.

The difference between antigens and antibodies is:

age pakcity.org Antigens	Antibodies
Pathogens contain special proteins called	When pathogens enter the body (blood) of
antigens.	host, these proteins stimulate the immune
	response in host i.e. synthesis of antibodies.

Q28: What is meant by social stigma?

Ans: **Social stigma**:

The drug addicts are very weak in their social behavior. They face social stigma i.e. the society dislikes them because of their unpredictable behaviors.

Q29: Write effects of hallucinogens.

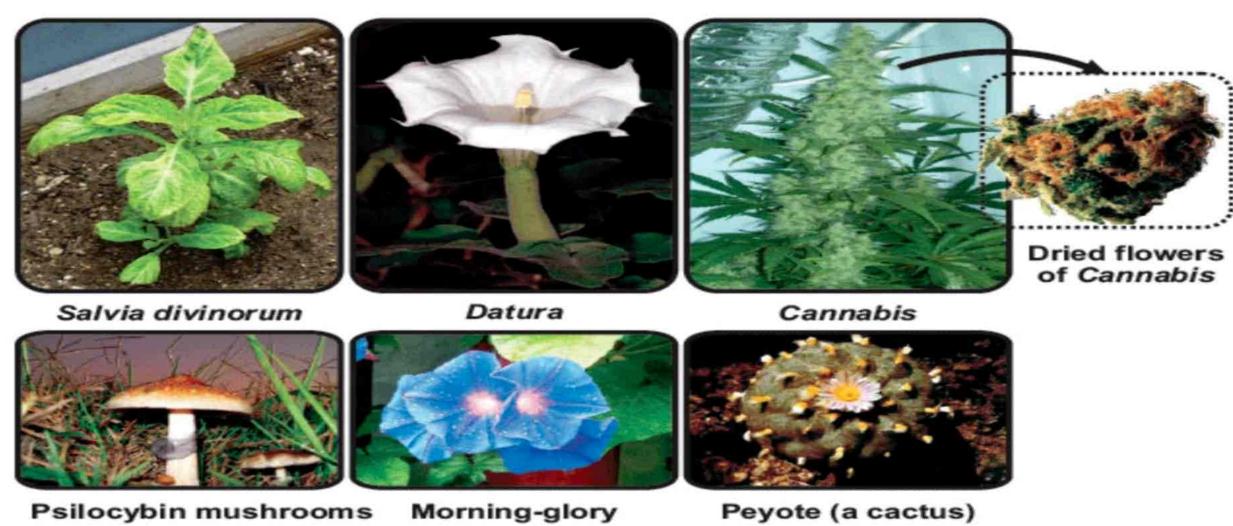
Ans: Physiologically, hallucinogens effect on the sympathetic nervous system causing dilation of pupil's constriction of some arteries and rise in blood pressure.

Q30: What is meant by Hallucinations?

Ans: **Hallucinations:**

Hallucinations are perceptions that have no basis in reality but that appear entirely realistic.

This diagram is just for information.





Ans: The major groups of antibiotics are:

- Sulpha-Drugs
- Cephalosporins
- Tetracyclines

Q32: Write a note on tetracycliens.

Ans: **Tetracycliens:**

These are broad spectrum bacteriostatic antibiotics and inhibit bacterial protein synthesis. Tetracyclien are used in the treatment of infection of respiratory tract, urinary tract, intestine etc.

Q33: Which organ is affected by the use of expired medicines?

- Ans: Expired drugs can cause damage to kidneys.
- Q34: Define Bactericidal and Bacteriostatic Antibiotics.
- Ans: Bactericidal meaning that they kill bacteria. Bacteriostatic meaning that they work by stopping bacterial growth.

Q35: Define Vaccine. Give its working briefly. Or What are Vaccines?

Ans: Vaccines:

Vaccines are used to develop immunity against viral and bacterial infections.

For example:

Vaccines against small pox, whooping cough and hepatitis B and C etc.

Q36: Name four diseases in which vaccines are used.

Ans: Four diseases in which vaccines are used:

- Whooping cough
- Polio
- **❖** Small pox
- Hepatitis

Q37: What do you know about sulpha drugs?

Ans: Sulpha drugs:

Sulpha drugs are synthetic antibiotic that contain sulfonamide group. Sulfonamides are broad spectrum bacteriostatic antibiotics. They inhibit the folic acid synthesis in bacteria. They are used to treat pneumonia and urinary tract infections.

Q38: Which medicines are used for lowering the blood pressure?

Ans: The sulfonamide group is also present in other medications that are not antibiotics.

For example:

Thiazide diuretics (medicines for lowering blood pressure).

Q39: What is the function of antibodies in blood?

Ans: Antibodies bind to pathogens and destroy them. In addition, memory cell are produced, which remain in blood and provide protection against future infections with the same pathogen.

Q40: Define broad spectrum antibiotic and narrow spectrum.

Ans: **Broad spectrum antibiotic:**

Some antibiotics can be used to treat a wide range of infections and are known as broadspectrum antibiotics.

Narrow spectrum:

Others are only effective against a few types of bacteria and are called narrow-spectrum antibiotics.

Q41: What is difference between vaccine and vaccination?



Image Metabolism
Source & Credit: microgene



A painting showing Edward Jenner, injecting the boy. It was the world's first vaccination.



(F-1974)	2		
Vaccine	→ pakc	ity.org	Vaccination
A vaccine is a material o	containing	Vaccination	is the treatment with a vaccine
weakened or killed pathogens o	and is used	to produce in	nmunity against a disease.
to produce immunity to a d	disease by		
stimulating the production of a	ntibodies.		

Q42: What is the most common method of administering vaccine?

Ans: The most injection, but some vaccines are given by mouth or nasal spray.

Q43: What is the mode of action of vaccines?

Ans: The mode of action of vaccines is:

Pathogens contain special proteins called antigens.

When pathogens enter the body of host, these proteins stimulate the immune response in host i.e synthesis of antibodies. Antibodies bind to pathogens and destroy them. In addition, memory calls are produced, which remain in blood and provide protection against future infections with the same pathogen.

Q44: What problem is faced by development of antibiotics resistant bacteria?

Ans: Resistance to antibiotics poses a serious and growing problem, because some infectious diseases are becoming more difficult to treat. Some of the resistant bacteria can be treated with more powerful antibiotics, but these are some infections that do not eliminate even with new antibiotics.

Q45: Why does society dislike a drug abuser?

Ans: The addicts are very weak in their social behavior. They face social stigma i.e. the society dislikes them because of their unpredictable behaviors.

Q46: Which antibiotic was discovered by Fleming?

Ans: Sir Alexander Flemming (1881-1955) was a Scottish biologist. He discovered the antibiotic penicillin from the fungus Penicillium notatum, for which he was awarded the Nobel Prize in 1945.

Q47: Write down the name of two drugs obtained from minerals.

Ans: Several common drugs are produced from minerals. The mineral iodine is used in making tincture of iodine, a liquid that helps prevent infection when applied to cuts and bruises. The powder form of silver nitrate is applied on wounds to stop bleeding and prevent infection.

Q48: Define sedative and give examples. OR

Why sedative drugs are used?

Ans: **Sedative:**

These drugs interact with central nervous system to depress its activities. Sedative drugs induce dizziness, lethargy; show brain function and depression induce suicidal thoughts irritability or excitement.

Example:

Diazepam.

Q49: Which micro-organism is killed by cephalosporins? Name two diseases for which these are used.

Ans: Cephalosporin's interfere with synthesis of bacterial cell wall and so are bactericidal. Cephalosporins are used to treat:

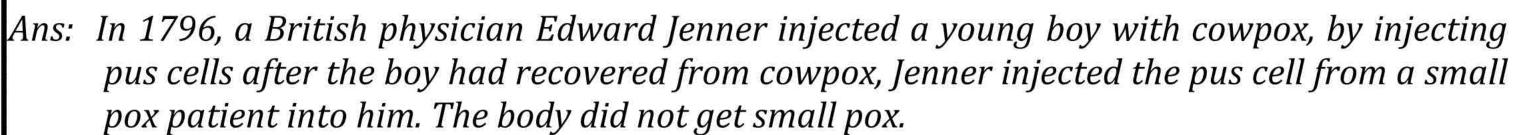
- Pneumonia
- Sore throat
- Bronchitis etc.

Q50: How Edward Jenner made the use of vaccine in 1796? OR

Write a short note on discovery of vaccines. OR

What is contribution of Edward Jenner?





So, it becomes clear that intentional injection with cowpox protected from small pox. This method was named "vaccination" and the substance used to vaccinate was called a "vaccine".

Q51: How Terramycin developed?

Ans: Researchers of pharmaceutical company spent two years testing soil from all parts of the world to find new antibiotics. The project resulted in the development of one antibiotic, terramycin, which is used to treat many infections.

Q52: What are the uses of carbolic acid in surgery?

Ans: Carbolic acid is used to sterilize surgical instruments and to clean wounds.

Q53: Which antibiotic is used to treat many infections?

Ans: Terramycin, antibiotic is used to treat many infections.

Q54: What happened when bacteria are exposed to the same antibiotics?

Ans: When bacteria are exposed to the same antibiotics over and over, they can change and are no longer affected by the drug.

Q55: Why Non-Prescription drugs are sold over the counter?

Ans: Non-Prescription drugs are sold over the counter, because these are considered safe enough. These includes aspirin and some cough medicines.

Q56: Write sources of mescaline and psilocin.

Ans: The sources of mescaline and psilocin are:

Mescaline comes from cactus and psilocin comes from a Mushroom.

Q57: Write advantage of Leaves of foxglove.

Ans: The advantage of Leaves of foxglove is:

The Cardio-tonic, known as digitalis is used to stimulate the heart.

It is made from the leaves of fox glove.

Q58: Write the difference between prescription and Non-prescription medicines.

Ans: The difference between prescription and Non-prescription medicines is:

Prescription	Non-Prescription Medicines
Prescription drugs are sold only on	Non-prescription medicines are sold over
physician's prescription.	counter because these are considered safe
	enough.

Q59: Why tetrocycline are not used in children under age of 8?

Ans: Tetrocycline are not used in children under age of 8, because it can cause permanently stain teeth.

Q60: On which work Sir Alexander Flemming was awarded Nobel prize?

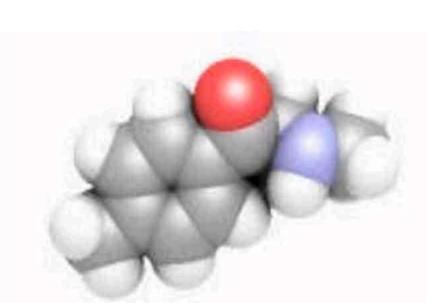
Ans: Alexander discovered the antibiotic penicillin from the fungus penicillium notatum for which he was awarded the Nobel Prize in 1945.

Q61: What is contribution of Joseph Lister in biology?

Ans: Joseph Lister (1827-1912) was an English surgeon. He promoted the idea of sterile surgery for the first time. He introduced carbolic acid to sterilize surgical instrument and to clean wounds.

Q62: From where is Marijuana obtained? OR What are its effects on human body? OR What is marijuana?

Ans: Marijuana is a hallucinogen, which is smoked. It is obtained from the flowers, stems, and leaves of the marijuana plant (cannabis sativa and C indicia). Small doses of marijuana result in a feeling of well-being that lasts two to three



Animation 3D Structure of Marijuana Source & Credit: disinfo



hours. High doses increases heart rate. It also effects the production of sperms in men and also weakens the short term memory.

Chapter: 18

Pharmacology





- Q.1: Describe narcotics with the examples of morphine and codeine. . V.imp
- Q.2: Write note on Sedative Drugs and Hallucinogens Drugs.
- Q.3: Differentiate between Medicinal drugs and Addictive drugs.
- Q.4: What are the sources of Drugs? V.imp
- Q.5: Explain principle usage of important medicinal drugs. V.imp
- Q.6: Write three types of medicines and their uses on the basis of chemical properties.
- Q.7: Write down mode of action of vaccines?. V.imp
- Q.8: Describe major groups of antibiotics. . V.imp
- Q.9: Write any three medicinal drugs. Explain in detail.
- Q.10: Classify Drugs on the basis of their mode of action and chemical properties.
- Q.11: How marijuana is used from which it is obtained and also write its two effects on.
- Q.12: Explain Narcotics and Hallucinogens.
- Q.13: Discuss the Drug Addiction and Associated problems.
- Q.14: How resistance is produced against antibiotics? Explain. . V.imp
- Q.15: What is the difference between Bactericidal and Bacteriostatic Antibiotics?