

Comprehension Test Questions for IBPS Clerk Pre, SBI Clerk Pre, LIC Assistant Pre and IBPS RRB Asst. Pre Exams.

Passage No. 148

Direction: Read the following passage carefully and answer the following questions.

Cancer drugs need to be powerfully toxic to kill tumor cells. But they also can kill healthy cells, sometimes with brutal side effects. Now, scientists have designed a way to seal cancer drugs inside tiny capsules so the drugs won't harm the healthy cells while traveling through the bloodstream. They hold that medicine securely until they reach a tumor and a remote control "switch" finally triggers the drug's **release**.

Smaller than bacteria, the capsules are called *nanoparticles* because their size is measured in *nanometers*. A magnetic field is the invisible force generated by a magnet. Researchers use a magnetic field to work as that remote control switch. Focusing that field on the cancer site ensures that the medicine is released only where it's needed.

The nanoparticles don't seek tumors out. They do, however, tend to collect at tumor sites. Tumors tend to grow so fast that the blood vessels inside them can't keep up. This causes holes to form in the blood vessels. For a nano-package carrying the medicine, those leaky spots become a doorway from the bloodstream into the tumor. The nanoparticles slip in through those leaks, then **accumulate** in the tumor.

Nanoparticles also can **pile up** in unwanted places. One such unhelpful collection point is the liver. This organ acts as a filter, snagging poisons out of the blood. It will also net some nanoparticles. Those caught in the liver could damage that organ if they shed too much of an anti-cancer drug.

For many years, researchers have studied how to make nanoparticles that won't drop their drug cargo at such unwanted sites. Sometimes they relied on a chemical trait of the tumor — or the *enzymes* it produces — to unlock the particles. But not all cancers have the same chemistry. So the medicine might still leak out to poison cells outside the tumor. The new innovation by Rinaldi's team is the creation of a nanoparticle that won't release its medicine anywhere until it gets very warm. And that warming occurs when the particle is exposed to a magnetic field.

1. Which of the following describes the correct meaning of the phrase "pile up" in the context of the passage?

A. Collision B. Accumulate C. Large D. Either A or B E. None of these

2.	Which of the	e following is an an	tonym of "accu	imulate" in the context	of the passage?					
A. Heed		B. Break	C. Disperse	D. Accrue	E. None of these					
3.	Which of the following is a synonym of "release" in the context of the passage?									
A. Commute		B. Clemency	C. Parole	D. Discharge	E. None of these					
4.	Which of the	Vhich of the following works as a "remote control switch"?								
	I. Magnetic field II. Nanoparticles III. Tumor cells									
A. Only	y I	B. Only II	C. Only III	D. Only I and III	E. None of these					
5.	Why is it emphasized that the cancer medicine should be released only when needed?									
	 Because they can kill the healthy cells along with the unhealthy cells. Because they make body temperature too warm. Because they are more effective when used centralized. 									
A. Only	y I	B. Only II	C. Only III	D. Only I and III	E. None of these					
6.	Which of the following is/are false? Duestion Bank									
	I. A nanoparticle has to be very warm in order to release the cancer drug. II. Nanoparticles can also accumulate in Kidney. III. Nanoparticles slip through the holes of blood vessels and accumulate in the second seco									
A. Only	y I	B. Only II	C. Only III	D. Only I and III	E. None of these					
7.	Why blood	vessels cannot hole	d tumor?							
A. Tum B. Tum C. Tum D. Bot E. Non	nors needs ope nors like to form nors grow very h A and C e of the above	n space to grow so the n in liver so they move fast so that they move	ey move out of th out of blood ves beyond the bloc	e blood vessels. sels. od vessels.						
8.	What is nan	oparticles?								
A. Cancer drug capsu E. All of these		les B. Cancer bac	teria C	Tumor particles D. Either A or B						

Correct Answers :

1	2	3	4	5	6	7	8
В	С	D	А	А	В	С	А





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Explanations:

1. **Refer:**

> Nanoparticles also can **pile up** in unwanted places. One such unhelpful collection point is the liver. This clearly indicates that pile up is used here in terms of "collection or accumulation". Though Pile up also means Accident, but this is out of the context. Hence option B is correct.

2. Accumulate means to assemble or collect.

Thus the only antonym of it is "Disperse" which means to scatter.

Hence option C is correct.

3. Release means to flow freely.

Release means to flow freely. The only word that has similar meaning is Discharge.

Hence option D is correct.

4. Refer:

Researchers use a magnetic field to work as that remote control switch.

Hence option A is correct.

5. Refer to:

Cancer drugs need to be powerfully toxic to kill tumor cells. But they also can kill healthy cells, sometimes with brutal side effects.

The Question Bank

From the underlined part above, it is clear that statement I gives the reason for such emphasis.

Hence option A is correct.

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6. Refer to:

The new innovation by Rinaldi's team is the creation of a <u>nanoparticle that won't release its medicine</u> <u>anywhere until it gets very warm.</u> And that warming occurs when the particle is exposed to a magnetic field.

Thus statement I is true.

Nanoparticles also can pile up in unwanted places. One such unhelpful collection point is the liver.

Kidney is not mentioned as a collection point in the passage. Thus we can say that statement II holds false.

This causes <u>holes to form in the blood vessels</u>. The nanoparticles slip in through those leaks, then **accumulate** in the tumor.

Thus, statement III is true.

Hence option B is correct.

7. Refer:

Tumors tend to grow so fast that the blood vessels inside them can't keep up

Thus the reason mentioned in option C is the most suitable one.

Hence option C is correct.

8. Refer to:

Now, scientists have designed a <u>way to seal cancer drugs inside tiny capsules</u> so the drugs won't harm the healthy cells while traveling through the bloodstream. Smaller than bacteria, t<u>he capsules are called *nanoparticles*</u> because their size is measured in *nanometers*.

The underlined parts above validate what's been stated in option A;

Hence option A is correct.

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