



End Semester Examination – Nov/Dec – 2016

Code : 14BI2009
Sub. Name : Bioethics , IPR and Biosafety

Semester : 2016-17 ODD
Duration : 3hrs
Max. marks : 100

ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)

Q. No	Sub Div.	Questions	Course Outcome	Marks
1.		<p>Read the following case study and answer the questions that follow:</p> <p>Next Tuesday is the election, and Jaya Malhotra doesn't know how she will vote. Jaya's state is asking its constituents to vote on a ban on smoking in all public places, including restaurants, businesses, and bars.</p> <p>The proposed ban would require businesses to set aside an area a few feet outside the business where people may smoke. It prohibits all smoking of tobacco products in 100% of enclosed places of employment. The objective, as cited in the law, is “to reduce employee exposure to environmental tobacco smoke.” Smokers may have an enclosed smoking room, if it has proper ventilation. Employers must also post nonsmoking signs at the entrance to their establishment. This includes all restaurants and bars. The ban was implemented gradually over a five-year period; in 1998, the third phase, which affects bars and clubs, went into effect.</p> <p>Many business people, especially restaurant and bar owners, oppose smoking bans. These owners argue that they should be able to operate their businesses as they please and that government-imposed smoking bans take away that right. They are also afraid revenues will decrease if smokers no longer patronize their establishments. However, some studies show that smoking bans have no significant effect on overall profits.</p> <p>Although Jaya doesn't smoke, both her parents do, and they have told her many times that they feel discriminated against by groups pushing for nonsmoking areas and by laws that restrict where smokers can go. It doesn't bother them that they cannot smoke while shopping, but they are angry about the proposed ban in restaurants and bars. Most restaurants in their state already have nonsmoking sections, and Jaya's parents feel this is enough.</p> <p>On the other side of the issue, Jaya's friend Sangeeta is very allergic to cigarette smoke. Her physicians have told her to stay away from smoke whenever possible because it triggers her asthma. While smokers claim that smoking bans infringe on their personal</p>	CO 1	

	<p>freedom, Sangeeta argues that people should only be allowed to do what they want as long as their actions do not harm others. She points out that if you are around smokers, you have no choice but to breathe in the smoke they exhale, and that the harmful effects of breathing secondhand smoke have been documented. The Centers for Disease Control report that an estimated 3,000 lung cancer deaths and 62,000 deaths from coronary heart disease are attributed to secondhand smoke annually. In children, secondhand smoke is also linked to sudden infant death syndrome, low birth weight, chronic middle ear infections, and respiratory illnesses. In fact, some scientists have determined that exhaled smoke actually contains more carbon monoxide than smoke inhaled directly from cigarettes.</p>		
a.	How would you vote if you were Jaya?		2
b.	Do you think a state should be able to regulate where a person smokes? Why or why not?		5
c.	Businesses, too, may suffer from a smoking ban due to the loss of customers. Many bars have filed suit to stop the ban, but so far they have not succeeded. Should businesses have the right to decide who comes into and what is done on their premises? Why or why not?		5
d.	Can you think of any compromises or alternatives to a total smoking ban?		2
e.	The law demands that an owner ask nonemployees to stop smoking and take reasonable steps to stop them. What would be some “reasonable steps”?		6
(OR)			
2.	<p>Read the following case study and answer the questions that follow:</p> <p>VaxGen developed a vaccine called AIDSVAX. The vaccine contained synthetic proteins of recombinant gp120, a protein normally found on the surface of HIV, the virus that causes AIDS. The vaccine was designed to induce the immune system to respond to this noninfectious protein and to produce antibodies that could protect the recipient from an actual HIV infection.</p> <p>In phase I clinical trials, the vaccine was tested for safety. Phase II clinical trials included a larger-scale test for safety as well as a test for the production of antibodies against gp120. As a result of these trials, AIDSVAX was shown to be safe, and patients receiving the vaccine did develop antibodies against gp120.</p> <p>Phase III clinical trials involved large-scale, placebo-controlled, double-blind tests of the vaccine’s effectiveness. Unfortunately, these trials revealed no difference in the overall rate of HIV infection between the vaccinated and the unvaccinated participants. The data indicate that recipients of the vaccine did produce antibodies against gp120, but that</p>	CO1	

	those antibodies were not adequate to protect against HIV infection. (It did appear that certain subgroups—ethnic minorities other than Hispanic—exhibited a small but statistically significant lowering of the infection rate, but these results are still being examined.)		
a.	Why do you think a person would volunteer to test an AIDS vaccine?		5
b.	If a vaccine being tested works for some ethnic minorities but not others, do you think it should be given to just those races or to everyone?		5
c.	Since the antibodies produced in AIDSVAX recipients were insufficient to protect them against infection, what might scientists try next?		5
d.	If a private company develops an AIDS vaccine, it will spend a large amount of money on development and testing. Should it offer the vaccine free of charge to people who cannot afford it, especially those in very poor countries? How can private companies afford to develop vaccines if they do not charge for them?		5
3.	A pregnant woman leading a group of people out of a cave on a coast is stuck in the mouth of that cave. In a short time high tide will be upon them, and unless she is unstuck, they will all be drowned except the woman, whose head is out of the cave. Fortunately, (or unfortunately,) someone has with him a stick of dynamite. There seems no way to get the pregnant woman loose without using the dynamite which will inevitably kill her; but if they do not use it everyone will drown. What should they do?	CO3	20
(OR)			
4.	A madman who has threatened to explode several bombs in crowded areas has been apprehended. Unfortunately, he has already planted the bombs and they are scheduled to go off in a short time. It is possible that hundreds of people may die. The authorities cannot make him divulge the location of the bombs by conventional methods. He refuses to say anything and requests a lawyer to protect his fifth amendment right against self-incrimination. In exasperation, some high level official suggests torture. This would be illegal, of course, but the official thinks that it is nevertheless the right thing to do in this desperate situation. Do you agree? If you do, would it also be morally justifiable to torture the mad bomber's innocent wife if that is the only way to make him talk? Why?	CO3	20
5.	Discuss about the principles and main features of TRIPS.	CO2	20
(OR)			
6.	With the help of a flow chart explain the Patent Prosecution in India.	CO2	20
7.	Read the following case study and answer the questions that follow: During her summer vacation, a lecturer visits a photo gallery. It is a very relaxed gallery,	CO1	

	with no major security presence and none of the ugly signs that pollute the nearby MNAC gallery with warning of criminal charges to be levied at anyone who breaks the rules. On seeing one of the paintings, the lecturer realises that it could form the basis of a lecture. She quickly takes a photograph of the painting. No one seems to mind. Later she finds an internet cafe, and logs into her module web pages. She uploads the photo of the artwork, and adds it to the resources page for the lecture in which she plans to discuss the artwork. The page has its security permissions set so that only staff and students can access it. The image will only be used in teaching of the module.		
a.	Has she done anything wrong? If so, what do you think she should have done?		6
b.	Is the image actually subject to copyright?		7
c.	Is she then covered by a permitted use?		7
(OR)			
8.	<p>Read the following case study and answer the questions that follow:</p> <p>A researcher regularly writes short articles and publishes them on her blog using. The articles usually attempt to make some connection between her work on the history of the Middle East and current events in the news. The blog becomes a popular read for many specialists in the area. After some time, the researcher is contacted by a friend who asks how she managed to get her work published on the web site of a slightly extreme Islamic student's organisation in France. She is baffled. On looking at the url, she finds a blog like web site, mostly in Arabic, with one of her articles sitting in the middle of the page, surrounded on all sides by arabic, of which she can decipher nothing. The article is about the Arab Revolt of 1916, and the coordinated attacks on trains that were an essential part of it. She is a little concerned, as she has absolutely no idea what kind of context her work is being presented in. It is attributed to her, with a url link to her blog, but it seems to be a very different article when presented out of its original context.</p>	CO1	
a.	How do you think this happened?		5
b.	Do you think it is likely?		5
c.	Has anything illegal been done?		5
d.	How would you respond?		5
<u>Compulsory:</u>			
9.	With a well labeled diagram demonstrate the use of modern biotechnology to cure sickle cell anemia.	CO2	20