



**The Open University of Sri Lanka**  
**Department of Physics**  
**Bachelor of Science Degree Programme-2015/2016**  
**Communication Skills -PCU 1163/PCU 2163-Level 3**  
**Final Examination**

Date: 9-July -2016

Time: 9.30 a.m.-11.30 a.m.

Index No	
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## Instructions to Candidates

- (1) This paper consists of Five (5) questions and you are asked to write answers to all the questions.

(2) Your hand writing must be legible.

(3) You must write your index number in the box provided.

(4) Write answers on the papers itself.

Question No	Marks
1	
2	
3	
4	
5	
Total	

**Q-1.** Read the following paragraph and answer the questions given below.

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Zika is primarily spread by the female *Aedes aegypti* mosquito, which is active mostly in the daytime. The mosquitos must feed on blood in order to lay eggs. The virus has also been isolated from a number of arboreal mosquito species in the *Aedes* genus, such as *A. africanus*, *A. apicoargenteus*, *A. furcifer*, *A. hensilli*, *A. luteocephalus* and *A. vittatus*, with an extrinsic incubation period in mosquitoes of about 10 days.

The true extent of the vectors is still unknown. Zika has been detected in many more species of *Aedes*, along with *Anopheles coustani*, *Mansonia uniformis*, and *Culex perfuscus*, although this alone does not incriminate them as a vector.

Transmission by *A. albopictus*, the tiger mosquito, was reported from a 2007 urban outbreak in Gabon where it had newly invaded the country and become the primary vector for the concomitant chikungunya and dengue virus outbreaks. There is concern for autochthonous infections in urban areas of European countries infested by *A. albopictus* because the first two cases of laboratory-confirmed Zika infections imported into Italy were reported from viremic travelers returning from French Polynesia.

Research into its ecological niche suggests that Zika may be influenced to a greater degree by changes in precipitation and temperature than Dengue, making it more likely to be confined to tropical areas. However, raising global temperatures allows for the disease vector to expand their range further north, allowing Zika to follow. Zika can be transmitted from a man to his sex partners. As of April 2016 sexual transmission of Zika has been documented in six countries – Argentina, Chile, France, Italy, New Zealand and the United States – during the 2015 outbreak.

In 2014, Zika capable of growth in lab culture was found in the semen of a man at least two weeks (and possibly up to 10 weeks) after he fell ill with Zika fever. The second report is of a United States biologist who had been bitten many times while studying mosquitoes in Senegal. Six days after returning home in August 2008, he fell ill with symptoms of Zika fever, but not before having unprotected intercourse with his wife, who had not been outside the US in 2008. She subsequently developed symptoms of Zika fever. Zika antibodies in both the biologist's and his wife's blood confirmed the diagnosis, raising the possibility of sexual transmission that had not yet been documented prior to the study published in 2011.

As of April 2016, two cases of Zika transmission through blood transfusions have been reported globally, both from Brazil, after which the US Food and Drug Administration recommended screening blood donors and deferring high-risk donors for 4 weeks. A potential risk had been suspected based on a blood-donor screening study during the French Polynesian Zika outbreak, in which 2.8% of donors from November 2013 and February 2014 tested positive for Zika RNA and were all asymptomatic at the time of blood donation. Eleven of the positive donors reported symptoms of Zika fever after their donation, but only three of 34 samples grew in culture.

Prevention involves decreasing mosquitoes bites in areas where the disease occurs and proper use of condoms. Efforts to prevent bites include the use of insect repellent, covering much of the body with clothing, mosquito nets, and getting rid of standing water where mosquitoes reproduce. There is no effective vaccine. Health officials recommended that women in areas affected by the 2015–16 Zika outbreak consider putting off pregnancy and that pregnant women not travel to these areas. While there is no specific treatment, paracetamol (acetaminophen) and rest may help with the symptoms. Admission to hospital is rarely necessary.

Effective vaccines exist for several viruses of the flaviviridae family, namely yellow fever vaccine, Japanese encephalitis vaccine, and Tick-borne encephalitis vaccine since the 1930 s, and dengue fever vaccine since the mid-2010 s WHO experts have suggested that the priority should be to develop inactivated vaccines and other non-live vaccines, which are safe to use for pregnant women and those of child bearing age.

The NIH Vaccine Research Center (U.S.) began work towards developing a vaccine for Zika per a January 2016 report. Bharat Biotech International (India) reported in early February 2016, that it was working on vaccines for Zika using two approaches: "recombinant", involving genetic engineering, and "inactivated", where the virus is incapable of reproducing itself but can still trigger an immune response with animal trials of the inactivated version to commence in late February. As of March 2016, 18 companies and institutions internationally were developing vaccines against Zika, but none had yet reached clinical trials.

(1) Read the paragraph carefully and write down a suitable heading in the space provided above.

(2) How is Zika primarily spread?

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(3) Name all the diseases that are spread by the mosquitoes as mentioned in the text?

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(4) Write the means of spreading the disease as stated in the paragraph.

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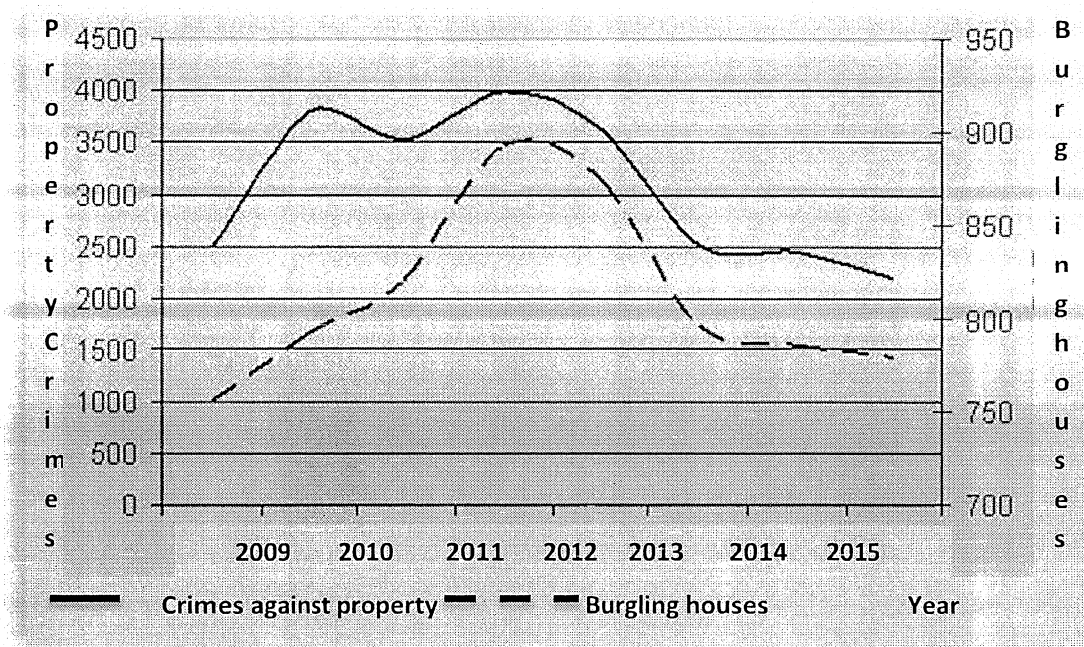
(5) Name the approaches to find a vaccine against Zika.

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**Q-2.** This chart illustrates the number of property crimes and burglaries carried out in Sri Lanka from 2009 to 2015. Describe the line chart in the space provided using not more than 100 words.



**Q-3** Read the Memo carefully and fill in the blanks using the words given below.

### Memorandum

To :The Members of the Harvard Corporation

From: Martha Minow, Morgan and Helen Chu Dean and Professor of Law

Date: March 3, 2016

Last November, I established a committee to examine questions about the HLS shield, and here I forward to you the committee report I received March 3rd for your consideration.

I give my thanks to each member of the (1)....., and especially its chair, Professor Bruce Mann, for their time, attention, and thoughtful deliberations. They undertook the work of considering (2)..... precedent, values and history, consulting with students, staff, faculty, and alumni—over 1,000 individuals—and deliberating seriously with one another. These are not easy tasks, especially in light of all else we ask of our teachers and scholars, staff, and students each day and all else undertaken by two busy alumni of the school. Professor Mann and the committee of (3)....., students, alumni, and staff stepped forward, and I and others are deeply grateful.

Each year since I became dean, I welcome entering JD students to campus with discussion of the portrait of Isaac Royall, Jr., whose gift of land helped support the first professorship of law at Harvard. I observe that the money came from the work of (4) ..... enslaved on his family's plantation in Antigua, and that while Harvard University at that time acted legally in accepting the gift, it is (5)..... that we never confine (6) ..... to solely what is currently lawful, for the great evil of slavery happened within the confines of the law. That is why HLS does not (7)..... teach what the law is, but engages in critiques of the law, constant reminders to test what we do in service to our (8)..... for virtue and justice.

(9)..... was known in the past, powerful and (10)..... questions now arise about the Harvard Law School shield. Designed in 1936 as part of the University's tercentenary, it contains a design based on a bookplate used by Isaac Royall, Sr., who passed his wealth—including enslaved persons—to his son, the initial donor to the school. What role should history play in (11) ..... who we are? What was the genesis of the shield and how does that history influence our path forward? Do we better remember our (12) ..... with the Royall family and with (13)..... by preserving the shield or by retiring it? What role do symbols play in the School's commitment to diversity, inclusion, and belonging inside our community and in the world at large? Does consideration of the shield's future put into question the names of buildings, endowed chairs, the nation's capital, and other embodiments of the past? I am impressed with the committee's consideration of all these questions, and am confident all its members thought hard about compelling and competing arguments and conclusions.

I respect and learn from the objection,(14)..... in the separate statement by Professor Annette Gordon-Reed and joined by student Annie Rittgers, that maintaining the shield, tied to an interpretive narrative, would help us think about the injustice of slavery alongside the School's current(15)..... to justice and equality. There are crucial suggestions here for how Harvard Law School should proceed in addressing the past and the future, whatever happens with the shield, and I will invite our community to take up this work. As for the shield itself, I endorse the committee's recommendation to retire it. There are (16)..... issues involved in preserving the histories of places and institutions with ties to past injustices, but several elements make retiring the shield less controverted than some other (17)..... about names, symbols, and the past. First, the shield is a symbol whose primary purpose is to identify and express who we mean to be. Second, it is not an anchoring part of our history: it was created in 1936 for a University celebration, used (18)..... for decades and used more commonly only recently, and does not extend back to the origin of the School or even much beyond recent memory. Third, there is no donor whose intent would be undermined; the shield itself (19)..... no resources entrusted in our care. Ultimately, the decision rests with the Corporation. If the Corporation agrees with the recommendation, preparation for the bicentennial of the School in 2017 gives us the opportunity to create recommendations to the Corporation for a new symbol that represents our mission and values going forward. Whatever the (20) ..... decides about the shield, the larger discussions about our values, our culture, and the importance of strengthening our community will continue, because they must continue. We must always face not only the fact of slavery but also its legacies and ongoing questions of injustice within our community and beyond. We must do so because we are dedicated to intellectual rigor and truth, and because we are willing and able to model reasoned discourse and openness to difference and dissent. In these most important ways, we remain a work in progress, and that work continues.

I look forward to your decision and to our ongoing work together.

Issues	Corporation	involves	occasionally	complex
Committee	faculty	evidence	individuals	crucial
ourselves	simply	aspirations	whatever	commitment
challenging	defining	connection	slavery	explained

**Q-4** Write your Curriculum Vitae in the space provided for the following job opportunity advertised below in the chronological form.

# EXCITING CAREER OPPORTUNITIES

Our client is a large progressive organization having fast moving consumer brands that are market leaders all over Sri Lanka Italy, Europe and USA. In order to expand and increase the out reach the organization has decided to hire services of following professionals in Colombo and Kandy in Sri Lanka

## **Resident Manager**

Resident Manager would be responsible for project start up, setting up of manufacturing facility, labour handling and meeting deadlines. He /She should have college education, proficiency in spoken and written Urdu and English; relevant experience in management would be a distinct advantage. Applicants should be proficient in use of computers and between 28-37 years of age.

Our client will offer attractive remuneration package along with conducive and congenial working environment.

Interested candidates may send their application latest in a week to [manager.snd@gmail.com](mailto:manager.snd@gmail.com) or send through box No. 937 c/o Daily Jang, Sri Lanka

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[illegible]

**Q-5**

**Write a topic and a topic sentence to the following Paragraphs.**

- (a) Pollution is the introduction of contaminants into the natural environment that cause adverse change. Pollution can take the form of chemical substances or energy, such as noise, heat or light. Pollutants, the components of pollution, can be either foreign substances/energies or naturally occurring contaminants. Pollution is often classed as point source or nonpoint source pollution.

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- (b) A biofuel is a fuel that is produced through contemporary biological processes, such as agriculture and anaerobic digestion, rather than a fuel produced by geological processes such as those involved in the formation of fossil fuels, such as coal and petroleum, from prehistoric biological matter. Biofuels can be derived directly from plants, or indirectly from agricultural, commercial, domestic, and/or industrial wastes.

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(c)

Wildlife traditionally refers to undomesticated animal species, but has come to include all plants, fungi, and other organisms that grow or live wild in an area without being introduced by humans. Wildlife can be found in all ecosystems. Deserts, forests, rain forests, plains, grasslands, and other areas including the most developed urban sites, all have distinct forms of wildlife. While the term in popular culture usually refers to animals that are untouched by human factors, most scientists agree that much wildlife is affected by human activities.

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- (d) Games and sports are an integral part of a student's life. A student should study hard to be successful in competitive examinations. But, he/she should also play games and sports to enjoy the health and vigor of life. Along with bookish learning, a student should spend his time on games and sports. There are many people who give importance only to bookish knowledge. Indeed, there is often no provision for games at all. In the Western countries, education of boys and girls is no longer confined to the lecture-theatres alone.

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