

PART B (5X16=80)

11. Read the passage carefully and answer the questions given below:

A. One of the reasons green buildings took off in the marketplace the way it did is that, green building treated the house as a system, including residents. According to market research, the second most important drive for homeowners to buy green homes was improved air quality, especially when children are at home.

B. Indoor air quality (IAQ) assaults come from various sources; organic sources like mould, animal dander, pollen and inorganic sources like the synthetic chemicals that are in building products and furnishings. Indoor air quality is very important. On average, people in industrialized nations spend about 90% of their time indoors that is in their homes. Unfortunately modern homes can contain substances that are potentially hazardous to our health. These range from normal dust, to major irritants, such as the chemical vapour from the newer synthetic building materials. This is a quiet epidemic brewing right under our noses.

C. Contaminants can enter our bodies in three main ways; ingestion, touch and inhalation. The pollutants of main concern when assessing a home's IAQ are the airborne contaminants, which usually affect humans through inhalation. These contaminants are either biological or chemical. The biological ones can originate either in the home or outside. Moulds, dust mites, pollen, animal dander and bacteria are all considered biological contaminants. Moulds produce both particulates and gases. High moisture content inside homes supports the growth and presence of moulds. The other forms of contaminants are chemicals, which include both gases and particulates. Though the sources are numerous for chemical contaminants, there are several main chemicals, some obvious and some not that pose a risk. Combustion by-products, including Carbon monoxide from furnaces, boilers and water heaters can also be a major source of the problem.

D. Radon is potentially responsible for as many cases of lung cancer as cigarettes. Radon can cause lung cancer with prolonged exposure. It is a radioactive gas that typically enters a home by seeping up from the underlying earth and rock. Although there are no immediate health effects, long term exposure to radon is a factor in approximately 2000 to 20,000 lung cancer deaths each year. Preventive rough-in for future radon mitigation is a simple and cost-effective procedure in new construction.

E. The single most significant source of potential health hazards is from attached garages. Car exhaust contains many known carcinogens and can migrate into the living space through doors when doors are opened to the garage. These gases can also migrate through poorly sealed walls and ceilings. An exhaust fan reduces the potential for exhaust to reach the house. Occupant activity like smoking a cigarette, combustion of gases from fossil fuels, gases released from building materials and gases from cleaning products are some other sources.

F. Volatile Organic Compounds (VOCs) are both naturally occurring and synthetic and are characterised by the fact they release vapours at room temperature. In a home, VOCs are found especially in wood panelling, particle board, carpets, paints, glues and solvents. VOCs can cause a wide variety of symptoms from headaches, eye irritation and chronic coughing to memory loss, fatigue and depression.

G. Recent studies reveal the link between productivity of workers and indoor air quality. Improving energy efficiency leads to better working conditions, resulting in significantly increased worker productivity. In the same way as lighting quality and temperature comfort, indoor air quality affects worker conditions. It is estimated that a total annual cost of poor indoor air quality to US employers at 15 billion dollars due to worker inefficiency and sick leave. Green designs resulting in productivity gains of one percent, can provide savings to a company, greater than savings from reduced energy consumption.

H. For over a decade product manufacturers in the building industry have been introducing products that reduce formaldehyde, volatile organic compounds and other potentially harmful chemicals. Today there is a wide range of products available that replace existing paints, adhesives, flooring and other finishes that are much healthier for children inside homes. Fresh air is critical to optimal health. Intentional mechanical ventilation provides control over ventilation rates and helps prevent moulds. Heat recovery ventilation is a good insurance policy against build up of indoor air problems without paying an energy penalty for direct fresh air ventilation. Many of these units help to pressurise the house, slightly reducing infiltration and resisting radon and car exhaust intrusion. Green buildings reduce indoor air quality problems by providing good ventilation to allow fresh air to flow through the house and exhausting the hazardous gases.

A. Fill in the blanks with the correct words taken from the text: 6

(Not more than five words)

- i) Green buildings have become popular because of _____.
- ii) Two sources that spoil indoor air quality are _____.
- iii) The growth of mould get activated by the _____.
- iv) If garages are attached to the houses, carcinogens can _____.
- v) Volatile organic Compounds are bad because they _____.
- vi) _____ may help to fight against indoor air problems.

B. State whether the following statements are True or False: 6

- i) Airborne contaminants affect human beings when they breathe.
- ii) Radon causes more lung cancer than cigarettes.
- iii) Chronic coughing is one of the symptoms of the presence of volatile organic compounds.
- iv) Workers' productivity does have a link with indoor air quality and temperature.
- v) Green designs help to save more than following reduced energy consumption.
- vi) One should worry about air quality only when children are at home.

- i) Involving risk or danger (paragraph B)
- ii) Widely spreading disease (paragraph B)
- iii) A substance that makes something impure (Paragraph C)
- iv) To flow slowly in small quantities (Paragraph D)

12a) You have come across the following advertisement in the newspaper on 20th April 2011. Prepare a detailed resume and a covering letter.

Technology for the future. Today!

As demand for wind energy grows multi-fold each year, we are gearing up with ambitious plans to meet the same. We are looking for bright young people who are technically competent and make a career in one of the growing industries spread across 32 countries.

Position: **General Manager**

Qualification and Experience: **Engineering graduate with 5 to 10 years experience**

Kindly send in your CVs to The Managing Director,
SUZLON
Pune -5

Or

b) Respond to the following advertisement that was published in The Hindu on May 2nd 2011 and apply to any one of the posts.

A fast growing company requires i) **Project managers/ Project Engineers**
ii) **Purchase Managers/Junior Engineers.**

Qualification: **An Engineering Degree in any discipline**

Requirements: **Communication skills**
Able to work in a team

Send your detailed CV with a covering letter for the post applied for to

**The HR manager,
SIMLEX Ltd.
Chennai-2**

13a) You are the manager of an automobile company that manufactures parts for automobiles. Some acids stored in a unit leaked and the workers who contacted the acid got severe burns and some who inhaled the gas fainted. Fifty workers were affected and the condition of ten of them is critical. Investigate the incident and prepare a report to be submitted to the Director with your findings and recommendations.

Or

b) There is a common accusation that there is a decline in the reading habit of the young boys and girls. Conduct a survey using valid tools, make findings, analyse the findings and offer your recommendations so that reading habit may be inculcated among the youth.

14a) Prepare **Eight** instructions to be given to the students who are planning an Industrial Visit to a Glass factory.

Or

b) Your department is conducting a National Symposium. Prepare a check list of **eight** items that you would prioritise for the successful conduct of the same.

15a) You are a citizen affected by noise pollution from various sources. Express your feelings strongly in about 300 words and offer corrective measures.

Or

b) "Appropriate Technology is that technology which is affordable within the resources available, is culturally acceptable and is environmentally harmless" – Think of an appropriate technology suitable for your native village/ town/ city and discuss in three pages how to go about it and how it would be beneficial to your place.