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Answers to Question 1.b

Safety management may be defined as a concern for safe equipment, process and layout design, safe work methods, design, recruitment and retaining of competent employees, promotion of safety awareness from an individual and organizational stand point, education in safety at all levels in the organization, managerial and financial support for the moral and ethical responsibility that underline any successful safety program.

~~These~~ Six events may be classified as activities of Safety management's:

(a) Safe Equipment and process Design:

Reliable equipment, with efficient and economic process operation leads to high productivity of a plant and ensures safety. For every installation, during its construction, five aspects needs to be checked thoroughly by the Project Management Team. to ensure safety. These are:

(1) Plant layout design. perspective.

(2) Piping and instrumentation diagram.

(3) Equipment and material specifications

(4) Process chemistry, ie. process flow diagram and chemistry of all materials

(5) Maintenance scope, safety and fire protection system.

(b) Safe work design method:

Various types of works are executed by an individual or by a group of people for the plant operation and maintain maintenance, also at the time of installation. Their standard

of work might be different and might not match with the equipment or environmental requirement, which may result in accident. Safe work procedure for every job should be designed by specialists on basis of certain standards, code instructions etc. Proper supervisions by the management staff will ensure that proper work procedure is followed.

(c) Recruiting and retaining of competent employees:

Experienced man power is the main asset of a business. Productivity, efficiency and safety of any process or business depend on the capability of the people engaged in business. Recruitment and retain of employees requires a lot of personnel management efforts.

(d) Promotion of safety awareness from an individual and organizational standpoint:

Organisation having successful safety programs invariably have a strong management commitment to safety. Therefore has ~~an~~ more likely chance in prevention of accident accidents. Management must have proper planning for growing safety awareness. There should be a safety department responsible for all safety activities.

(e) Education in safety at all level:

The behaviors of people causes or prevent accidents. If the behaviors of people are modified to improve their safety awareness, accident prevention could be successfully managed. Proper selections of employees, necessary training for the job, educating them about hazard and safety would improve the safety management system.

(f) Managerial and financial support for the moral and ethical responsibilities:

The basic cause of accidents are poor management policies and decisions, in addition to personal and environmental factors. For good safety management program, it is needed to have a well-designed plant, proper equipment, training, placement of manpower and equipment, safety awareness awareness and high morals of employees. These activities will be ineffective without managerial and financial support.

Ans to ques no 1.(a)

As a modern citizen, I can say that there has been a noticeable change in the view point of safety in ~~our~~ our society. More successful recent approaches to safe operation have followed a "human factors" or "behavioral approach" and a new set of safety principles have been defined.

As applied to the process industries these are:

1. Safety should be like other managerial function. Setting goals-then planning, organising, motivating, implementing and then monitoring to achieve goal.
2. Certain types of activities are more likely to cause accidents:
 - Unusual or non-routine activities
 - Non-productive activities.
 - Construction and unscheduled maintenance activities.
3. Safety personnel must take pro-active approach by:-
 - Searching for the root cause of accidents.
 - Establishing procedure to reduce the chance of accident or not to happening same type of accident again.

4. In many cases, changes are part of normal human behavior.
5. ~~There~~ There are three essential elements in an employee safety system:
 - The physical (Safety equipment, machines, facilities etc)
 - The managerial (Safety regulation, planning)
 - The cultural (Safety practice at all level and for all)
6. There is no single correct way to achieve safety in an ~~organ~~ organization but the following aspects are the essential for achieving safety:
 - Involve supervisors and make them accountable.
 - Involve management at all levels.
 - Senior management must demonstrate commitment
 - Be flexible.
 - Be perceived as positive.

So, we can ~~see~~ see that the point of view in modern society has changed a lot. ^{of safety}

Ans to question 3.

A valid contract is a ~~con~~ fact that will enforce and creates legal rights and ~~obligations~~ obligations. A valid contract ^{must} contain ~~containing~~ an agreement, intention and consideration. It may have to be ~~written~~ in writing to be legally valid.

A valid contract must have a proposal. The ~~states~~ proposal have the following elements:

1. Signification of one's willingness
2. Willingness is expressed to another person.
3. The willingness may be affirmative or negative.
4. It has a definite object with the intention to create legal relation.

The rules of a proposal are:

- (a) The proposer must intent to create legal relations. If there is no intention to create legal relation rather the offer prevail merely an intention to create social relation, that offer will not be considered lawful.
- (b) Merely expression of intention is not sufficient. Advertisements, catalogue, tim-table of bus or train are not proposals, if someone makes any statement regarding their intention ~~during~~ during a conversation of course that will ~~be~~ not be considered as an offer, even though the person to whom such intention is expressed acts accordingly, there will be no offer.
- (c) Offer may be to definite person or a class of person or to the world at large generally.
- (d) The proposal must be a ~~definit~~ definite one. Any statement which is ambiguous, vague or not definite about the offeree or the subject matter is not considered as a valid proposal.

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(e) Proposal may be expressed or implied. When an offer is made stating in words or in writing, it is called an express offer, when it is implied from the conduct of a person it is called an implied offer.

(f) The offer must be definite, certain and unambiguous.

(g) A person cannot accept an offer until they know the subject of the offer. To complete an offer lawfully the proposal must be communicated to the offeree properly according to the Section 4 of the contract act.

(h) An offer may be conditional, but the condition must be communicated to the offeree. But if the conditions are clearly written or expressed and should have been known to the offeree, they cannot plead the ignorance of the conditions.

After the proposal is made, communication of offer is to be done. According to the Section 4 of the contract act, the communication of a proposal is complete when it comes to the knowledge to the person to whom it is made.

After the communication of the offer, if it not ~~retracted~~ revoked comes to the acceptance phase. Acceptance of a proposal means unconditional agreement to all the terms of the proposal.

The rules of a valid acceptance are:

(a) Acceptance must be ~~absolute~~ and ~~absent~~ absolute and unqualified. In section 7, of the contract act, it is said that in order to convert a proposal into promise the acceptance must be absolute and unqualified.

(b) The acceptance must be unconditional. An acceptance with a variation is no acceptance. Any attempts to vary the terms of ~~as~~ a proposal will result in a counter offer.

- (c) Acceptance might be conditional. By its terms, an a conditional acceptance is a counter offer.
- (d) mere inquiries do not count as rejection. In some situations, inquiries may seem like counter offers.
- (e) The acceptance must be expressed in some usual and reasonable manner, according to Section 7 of the Contract Act.
- (f) A counter offer may become a term of the agreement if it is accepted.
- (g) The acceptance must be communicated to the offeror. Prior to acceptance, an offer may be withdrawn and before the communication of the acceptance to the offeror it might be withdrawn.
- (h) No contract is formed if the offeree remains silent and does nothing to show that he has accepted the offer.
- (i) The postal rule. This is an acceptance to the basic rule of communication of acceptance, basically when an acceptance is posted this is when the contract is formed, not when it is received by the offeror. Section 4 of the act supports this.
- (j) The mode of acceptance: when the promisor prescribes a particular mode of acceptance, the offeree must follow that.
- (k) Time of acceptance is prescribed by the offeror. The acceptance must be done within the time.
- (l) Before offer, there cannot be acceptance before the offer is made. According to Section 5 of the act, a proposal may be revoked at any time before the communication of the acceptance is complete.

(m) Acceptance must be made when the offer is in force, before it is revoked or has lapsed. The late acceptance will not be granted.

If the proposal is not revoked or an counter offer is not made. Then the parties ~~reach~~ reach to the Agreement stage. According to the section 2(e) of the contract act, 1872-every promise and every set of promises, forming the consideration for each other, is an agreement. It also says that agreement ~~enforced by~~ enforceable by law is a contract. Agreement has three necessary elements -

- it will be a promise
- it will form a consideration
- the consideration will be formed for the parties ^{to} each other.

The contract must be made in free ~~consent~~ consent. It is essential that every agreement must be a true expression of the intention of the parties.

Ans to question 7

Medical measures of the prevention of occupational diseases are discussed below:

(1) Pre-placement examination of employees is the foundation of an efficient occupational health service. Employee's family, past, occupational & social history, a thorough physical examination should be done and recorded in his personal file.

During fresh ~~separate~~ recruitment candidate may be rejected due to health lagging or may be placed suiting his health and mental condition. Preplacement examination also served as a ~~useful~~ useful bench-mark for future comparison for health deterioration.

Sign: Rukayya

- (2) Periodic examination helps determining the disease at the early stage. The frequency and content of the examination will depend upon the type of occupational exposure. Ordinarily, workers are examined once in a year.
- (3) Medical and health care services is a basic function of the occupational health service. First aid service should be provided within the factory. Immunization is another accepted function. Company should arrange insurance scheme to support health care of the employees.
- (4) Notifications: The main purpose of notification of health related national laws or regulations is to initiate measures for prevention and protection against occupational diseases. This also helps in effective application of the laws and helps to investigate the working conditions and other circumstances.
- (5) Supervision of working environment provides information of primary importance in the prevention of occupational diseases. The physician should visit frequently ~~at~~ at the working place, to check and monitor the ~~use~~ work environment, and various aspects of occupational physiology.
- (6) Maintenance and analysis of records should be done as they provide guidelines for decision making and planning. It will be better to collect health records of employees who have retired ~~or~~ or left the service, especially for the critical works. This enables to assess the hazards which have long term effect.
- (7) Health education and counseling should be provided for the employees. All the risks at the working place and protective measures for them should be explained to him. He should be frequently reminded about the dangers at the working place, so that he is alert.

The engineering measures are discussed below:

(1) Plan layout and design: Proper layout and design are one of the main factors of safety and occupational health. Proper space, ventilation, use of safety gears etc. contribute to congenial working place.

(2) Good house keeping:

Clean and good work environment not only keep good health but also freshes mind. Equipment, tools and other machine materials should be kept systematically and orderly so that less time and efforts are required.

(3) General Ventilation:

There should be good ventilation space in the working space. There is a rule that for each worker, there should be at least 5 sqft. of ventilation opening through which air can pass and must have 500 c.ft of air space for each worker.

(4) Local exhaust ventilation: must be provided for dust, fumes and injury substances produced with a particular job. These should be trapped and enclosed, and extracted at the source before they contaminate the general working place.

(5) Mechanization and substitution:

The plant must be mechanised to the fullest possible extent to reduce hazard of contact with harmful substances. Substitution is the replacement of harmful material with a harmless one or one of lesser toxicity.

(6) Isolation: Critical and offensive operations may be isolated in a separate building so that employees are not directly connected with it. Certain operations can be done at nights or on holidays in absence of the usual staff.

(7) Protective devices must be provided to the employees working ~~in~~ in hazardous environment.

(8) Statistical monitoring and research:

Statistical monitoring comprises the review at regular intervals of ~~collection~~ collected data on health and environmental exposure of occupational groups. This monitoring provides individual health care of employee, it provides monitoring of rate of increase of dose levels of victims. Research provides conditions of the work environment and different disease control program.

Answer to question 5(A)

Personal Protective Equipment (PPE) are vital safety gears to work in hazardous work situation. This not only protects from accidents, but their careful use also ensures employee health at the working place.

We know Covid-19 is an airborne disease, that means it can spread through air. When a person sneezes or coughs the virus is spread into the ~~the~~ air. Upon entering a human body, it heavily and primarily attacks the lungs. So, working in hazardous conditions like covid-19 safety measures must be taken. Those measures should be:

(i) Protection of eyes: The virus can enter into the body by eyes. Eyes are our valuable organ. Accidentally rubbing eyes with ~~the~~ hands or by airflow, the virus may enter our body. So, we should wear safety goggles, corrective lenses and protective spectacles to cover our eyes.

2) Face protection: Workers should cover their faces to protect themselves because the virus can enter through nostrils. There are many types of PPE designed to shield the face. Example: face-shields, ~~mask~~ N-95 mask.

3) Hand protection: Fingers and hands are the most exposed parts of human body. We interact or work with these so they are most likely to be infected. So it is necessary to use hand gloves at all times. We can also use hair cap to cover our hair.

For the doctors and medical personnel they should wear full-body PPE covering their whole body. To ensure safety for ourselves and others, it is extremely important to use PPE.

Answer to 5.(B)

There are two types of companies:

i) Private company: A company ~~that~~ is one which

- (a) restricts the right of the members to transfer their shares, if any.
- (b) limits the numbers of members by 50 and prohibits any invitation to the public to subscribe for any shares in, or debentures of the company.

ii) Public company: All the other companies other than the private companies are called public companies.

The main difference between them are given below:

1. Paid up capital:

A private company must have a minimum paid up capital of RS. 1,00,000 and public company must have RS. 5,00,000

2. Number of members in private company cannot be more than 50. In public company the minimum is 7 but there is no maximum.

3. There is a restriction ~~is~~ on transfer of shares in private company. In a public company there isn't any restriction.

4. A private company cannot invite the public to buy its shares. A public company can do so.

5. A private company must add "Private Limited" at the end of its ~~is~~ name.

6. A private company need not file a prospectus or statement in ~~its~~ lieu of prospectus.

Answers to question 4(A)

Comparison of hazard business model and hazard accident model:

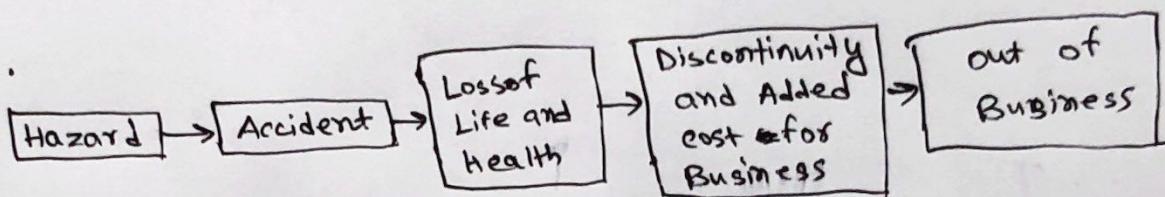


fig 1: Hazard Business model.

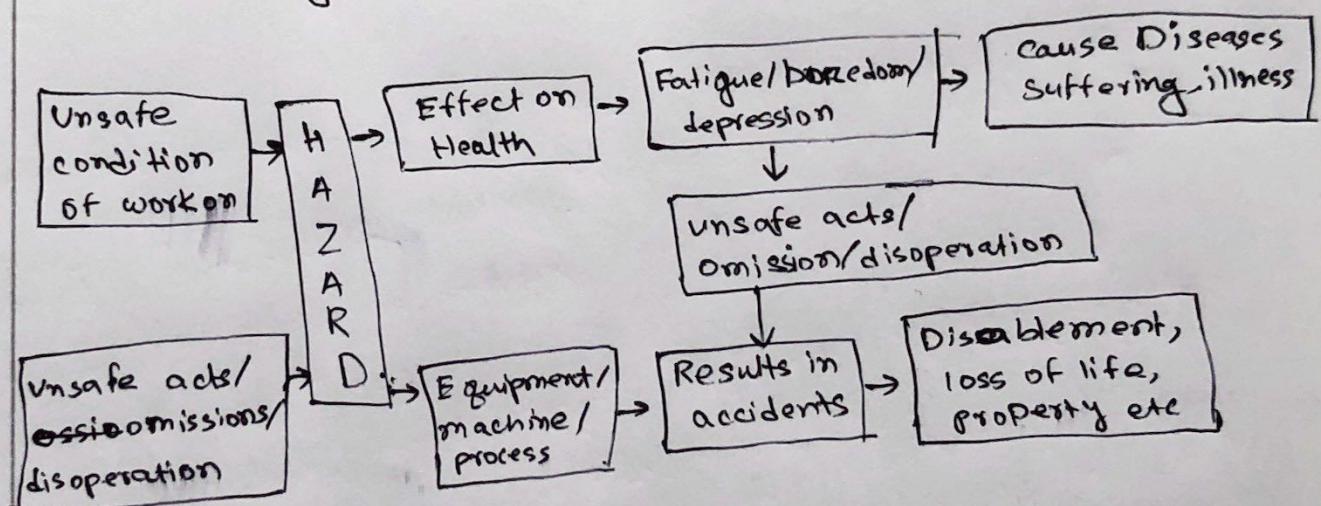


Fig. 2 Hazard accident model.

The hazard business model shows a basic flowchart of the occurrence of events due to hazard and how they result in any institution or company to run out of business.

The hazard accident model maintains a timeline of events leading to hazard. From the accident model, the adverse effect of the hazard may be noted very specifically.

Both the models depicts the fate of society due to hazard in two different ways.

Ans to 4. (B)

Hazard is a chance of being harmed or injured or to expose to harm or danger. Adverse consequence of hazard in our life:

Hazard includes conditions that can result in death, injury etc. The adverse conditions are:

1. Human impact: Personally a hazard may affect a person by personal injury, disablement, psychological effects, ~~de~~ or even death.
2. Economical impact: Downfall in economy can hamper us by loss of production, property damage, legal liability and image and good will loss.
3. Environmental Impact: The impact on the environment can be of air ~~is~~ pollution, water pollution, ~~is~~ soil pollution.